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PENNSYLVANIA  
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No. 11

GENERAL BULLETIN NO. 318

# Fertilizer Report

January 1 to July 31, 1918

JAMES W. KELLOGG, Chief Chemist  
BUREAU OF CHEMISTRY



Published Monthly by Direction of  
CHAS. E. PATTON, *Secretary of Agriculture*, Harrisburg, Pa.

Entered as Second Class Matter, March 22, 1918, at the Post Office at Harrisburg, Pa., under the Act of June 6, 1900. Acceptance for mailing at special rate of postage provided in section 1103, Act of October 3, 1917, authorized on June 29, 1918.

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1918

P 38.1

1.3

**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF CHEMISTRY**

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**PRODUCTS ANALYZED**

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**OFFICIAL SAMPLES SECURED BY SPECIAL AGENTS**

**FERTILIZERS**

**FEEDING STUFFS**

**LINSEED OIL**

**PAINT**

**PUTTY**

**TURPENTINE**

**LIME**

**SEEDS**

**SPECIAL SAMPLES FOR RESIDENTS OF THE STATE**

**LIME, \$1.00**

**LINSEED OIL, \$1.00**

**FEEDING STUFFS, \$1.00**

**SEEDS, 25c**

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## CONTENTS.

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	Page.
Letter of Transmittal, .....	5
Introduction, .....	7
Acknowledgments, .....	10
Fertilizer Laws, .....	10
Discussion of Results of Inspection, .....	14
Deficiencies, .....	20
Average Analyses and Retail Prices, .....	21
Key to Tables, .....	22
Analyses of Complete Fertilizers Table I, .....	24
Analyses of Nitrogen and Phosphoric Acid Fertilizers Table II, .....	56
Analyses of Ground Bone Fertilizers Table III, .....	82
Analyses of Acidulated Phosphate Fertilizers Table IV, .....	86
Analyses of Rock and Potash Fertilizers Table V, .....	98
Analyses of Miscellaneous Fertilizers Table VI, .....	100



## LETTER OF TRANSMITTAL

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DEPARTMENT OF AGRICULTURE  
BUREAU OF CHEMISTRY

Harrisburg, Pa., December 2, 1918.

Hon. Charles E. Patton,  
Secretary of Agriculture,  
Harrisburg, Pa.

Dear Sir:—I have the honor to transmit herewith for your approval a report of the chemical analyses made by this Bureau of the samples of commercial fertilizers received from authorized sampling agents of the Department during the Spring season of 1918.

It is recommended that this report be published in bulletin form for distribution.

Very respectfully,

JAMES W. KELLOGG,  
Chief Chemist.





# FERTILIZER REPORT

January 1 to July 31, 1918.

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## INTRODUCTION

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As a result of the inspection of Fertilizers during the Spring season from January 1st to July 31st, 1918, the authorized sampling agents of the Department secured 1,724 samples from selling agents throughout the State. They were drawn in a regular, prescribed, uniform manner, from sacks found being offered for sale, carefully mixed, subdivided, placed in special cartons and forwarded to the Department, accompanied by a report for each sample showing the information found upon sacks or attached cards. Of the number received, 1,198 were analyzed, representing 640 different brands or formulae, the output of 79 manufacturing companies, registered with the Department as required for 1918.

Each brand was represented by from 1 to 3 samples, each being analyzed separately. Those received and not analyzed, in order to avoid duplication and unnecessary work, included brands which were represented by more than 3 samples. Determinations were made upon each sample for moisture, nitrogen, total available and insoluble phosphoric acid and total water soluble potash where guarantees were claimed for these forms of plant food for the purpose of determining if these guarantees were correct. In addition to the chemical analyses, certain brands were examined microscopically to determine whether or not they contained certain materials as untreated leather, hoof, horn and woolwaste, and to note if those brands containing "bone" as a part of the brand name, were properly labeled. Only accidental traces of the untreated materials were found present. One brand was found to be not properly labeled as the phosphoric acid was not wholly derived from animal bone as required where the brand name indicated it to be present in this form, but was derived largely from phosphate rock. Three samples, representing one brand purporting to be Ground Bone Meal, were found to be not pure ground bone as claimed but to contain considerable organic matter probably being derived from tankage including bone which accordingly were not classified as "Ground Bones" but were included in Table II with

the brands and samples furnishing nitrogen and phosphoric acid. In these few cases of misbranding, the manufacturer agreed to correct registrations and to properly rebrand and relabel these materials.

For the purpose of comparison, as is customary, the samples and brands, examined together with results secured, were arranged and tabulated in six groups or classes as follows: 420 Complete Fertilizers, furnishing nitrogen, phosphoric acid and potash; 519 Nitrogen and Phosphoric Acid Fertilizers, including Dissolved and Acidulated Bone and Fertilizers of similar character; 43 Ground Bone Fertilizers, furnishing nitrogen and phosphoric acid; 204 Acidulated Phosphate Fertilizers, furnishing phosphoric acid; 6 Rock and Potash Fertilizers, furnishing phosphoric acid and potash and 6 Miscellaneous Fertilizers, including 3 samples of Nitrate of Soda and 3 of Tankage and Bone Fertilizers, furnishing nitrogen and phosphoric acid.

Because of the continued irregularity of market prices and the difficulty in arriving at any values which would be reasonably correct or fair, no attempt has been made to fix valuations for comparison with the reported selling prices for the brands included in this report. The retail selling prices increased considerably over those prevailing during 1917, as the following average prices for the Spring and Fall season of last year and the present season for each of the classes considered respectively will show: Complete Fertilizers, \$28.33, \$30.26, \$38.59; Nitrogen and Phosphoric Acid Fertilizers, \$23.93, \$27.34, \$33.22; Ground Bone Fertilizers, \$38.80, \$43.58, \$50.21; Acid Phosphate Fertilizers, \$17.56, \$20.68, \$23.45; Rock and Potash Fertilizers, \$25.70, \$27.50, \$30.93. The approximate retail unit values for Nitrogen, Available Phosphoric Acid and Potash will also illustrate the increased cost of fertilizer materials. Based on the average analyses and prices shown in the tabulated results which follow, the average figures for Acid Phosphate Fertilizers (Table IV), gives a retail value of \$1.52 a unit or 7.6 cents a pound for phosphoric acid. Using these figures for the fertilizers supplying nitrogen and phosphoric acid (Table II), the retail value per unit for nitrogen would be \$11.10 or 55.5 cents a pound. In a like manner by making use of the values thus obtained for nitrogen and phosphoric acid, the retail values for potash in the Complete Fertilizers (Table I) would be \$7.25 or 36.3 cents a pound. While these values cannot be considered accurate, they will illustrate the increase in cost for the elements supplying plant food. In order to arrive at the wholesale prices, a deduction of the cost of freight, bagging, mixing, commissions, etc., would be necessary. The variations in selling prices were considerable in all brands of like composition but were especially so in the case of the Complete Fertilizers and those supplying only nitrogen and phosphoric acid. In the former class, the retail values ranged

from \$22 in a brand guaranteed to contain 0.41 per cent. nitrogen, 6 per cent. available phosphoric acid and 0.50 per cent. potash, to \$120 a ton for a brand guaranteed 3.30 per cent. nitrogen, 8 per cent. available phosphoric acid and 2 per cent. potash. There were 35 brands and 67 samples of Complete Fertilizers having the formula 1-8-1 and the price for these brands were from \$31 to \$42 or a difference of \$11 a ton for fertilizers supplying the same amount of plant food. In the Nitrogen and Phosphoric Acid Fertilizers, the prices ranged from \$18.65 a ton in a brand guaranteed 1.23 per cent. nitrogen and 9 per cent. available phosphoric acid to \$110 a ton in a brand guaranteed 2.29 per cent. nitrogen and 8 per cent. available phosphoric acid, or a difference of \$91.35 for a fertilizer carrying 2.06 per cent. more nitrogen and 1 per cent. less phosphoric acid. A study of the retail prices shown in the accompanying tables will indicate that as a rule there is no saving made by purchasing low grade fertilizers in preference to those supplying the larger amounts of the three principle elements of plant food. The brands carrying small and fractional percentages of these elements, must of necessity, contain large proportions of inert material and consumers should consider these facts in comparison with prevailing prices in order to judge what brands of fertilizers should be purchased.

The limited amount of materials supplying potash has tended to decrease the number of brands offered for sale containing potash, as well as to reduce the amount of this plant nutrient in the Complete Fertilizers. Of the Complete Fertilizers, there were 64 different formulae guaranteed to contain from  $\frac{1}{4}$  to 10 per cent. nitrogen,  $\frac{1}{4}$  to 12 per cent. available phosphoric acid and  $\frac{1}{8}$  to 3 per cent. potash. Of the 241 brands and 420 samples of this class or group, the greater portion were guaranteed to contain less than 2 per cent. potash, there being 11 brands and 21 samples carrying 3 per cent. potash and 31 brands and 52 samples guaranteed to contain 2 per cent. of potash. They averaged upon analysis 1.43 per cent. nitrogen, 8.79 per cent. available phosphoric acid and 1.29 per cent. potash and this latter figure indicates the average amount of potash supplied by a brand of Complete Fertilizer.

The number of deficiencies found upon analysis compared with guarantees was nearly double the number of deficiencies noted during the two previous seasons, amounting to 27.5 per cent. of the total number of samples analyzed. In many cases, as will be noted, where deficiencies occurred in one element, the results secured showed "overages" in the other element or elements, thus to a large extent causing a balance of the nutrients supplied. This marked increase in deficiencies may, to some extent, have been due to manufacturing and shipping conditions and the difficulty of securing supplies and scarcity of materials incident to the war.



In the following pages will be found copies of the laws, tables showing in detail the results of analyses of each sample, arranged in classes with brand names, name and address of manufacturers and selling agents and a discussion of the results of inspection.

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### ACKNOWLEDGMENTS.

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Acknowledgment is herewith made and thanks extended to the Secretary of Agriculture, Hon. Charles E. Patton, to G. G. Hutchison, General Agent, and H. E. Klugh, Chief Clerk, for advice and assistance received, and to each member of the Bureau Staff for their co-operation in making possible the completion of the season's fertilizer inspection work.

Mr. V. B. Hausknecht, First Assistant Chemist, had charge of the reception and preparation of samples and supervision of the details of analytical work, making duplicate analyses and check determinations where required. The microscopical examinations were made by H. E. Gensler, who also assisted in the analytical work. The following assistants carried out the chemical analyses: Messrs. William Weber, G. J. Kuhlman, Jr., F. B. Williams, C. E. Engle, W. E. Huber and Hollis M. Wible.

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### FERTILIZER LAWS.

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The following laws regulating the sale of fertilizers are included in this report for reference as to the requirements necessary in selling fertilizers in Pennsylvania. The Act of May 1, 1909, commonly referred to as the "New Fertilizer Law," was amended May 29, 1917, by changes in section 1 with respect to labeling and guarantees, and in section 3, making changes in schedule of registration fees. This law as amended and now in force together with the Bone Law, approved April 23, 1909, are as follows:

## FERTILIZER LAW

As amended May 29, 1917.

No. 205.

## AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That all corporations, associations, partnerships, or persons, before selling or offering for sale any commercial fertilizer in the Commonwealth, except the dung of domestic animals, lime, marl, and wood ashes, shall brand or attach to each bag, barrel, or package in a conspicuous place on the outside thereof, a plainly printed statement giving the following particulars and no others:—

(1) The number of pounds of fertilizer contained in the package.  
(2) The name, brand, or trade-mark under which the fertilizer is sold.

(3) The name and principal address of the manufacturer, importer, or other person putting the fertilizer on the market in this Commonwealth.

(4) The minimum percentage of each of the following constituents which the fertilizer may contain: (a) Nitrogen; (b) nitrogen equivalent to ammonia; (c) total phosphoric acid; (d) available phosphoric acid; (e) potash soluble in distilled water. The potash may be claimed "derived from," or "equivalent to," sulphate of potash, if there is not a sufficient amount of chlorine present to unite with one-half ( $\frac{1}{2}$ ) of one per centum (1%) of actual potash ( $K_2O$ ). In the case of undissolved bone, tankage, phosphate rock, and similar materials in their natural and untreated conditions, when sold unmixed with other substances, the minimum percentage of the total phosphoric acid therein may be stated, instead of the percentage of total and available phosphoric acid. But, in the case of basic phosphatic slag, the available phosphoric acid shall be stated on the basis of the results of an analysis by the Wagner method, so-called, until such time as the Association of Official Agricultural Chemists of North America shall adopt an official method of analysis for basic slag, after which the available phosphoric acid shall be stated on the basis of an analysis by the method of said association.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this

Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred and fifty tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade-name, sold within the State during the last preceding year; and if the said amount shall exceed one hundred and fifty tons, and be not more than two hundred and fifty tons, he or they shall pay the sum of twenty dollars, as aforesaid; if the said amount shall exceed two hundred and fifty tons, and not more than four hundred tons, he or they shall pay the sum of thirty dollars; if the amount shall exceed four hundred tons, and not more than five hundred tons, he or they shall pay forty dollars; and if the amount shall exceed five hundred tons, he or they shall pay fifty dollars. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all moneys so received shall be immediately paid by the Secretary of Agriculture into the State Treasury for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person

violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid by him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, of any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the vaule of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.



## BONE LAW.

No. 95.

## AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23rd day of April, A. D. 1909.

EDWIN S. STUART.

## DISCUSSION OF THE RESULTS OF INSPECTION.

As already indicated the 1,198 samples, including 640 different brands representing the commercial fertilizers registered and sold in Pennsylvania during the Spring season of 1918, were grouped in six classes and the results secured arranged in as many tables for comparison. The results of analyses and the main features noted in these classes are discussed separately as follows:



## COMPLETE FERTILIZERS.

*Analyses in Table I.*


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The complete fertilizers or those furnishing nitrogen, phosphoric acid and potash included 420 samples, 241 brands, the output of 58 companies. Nearly one-third of this class were found to be deficient there being 31 which failed to meet the guarantees for nitrogen, 66 in available phosphoric acid and 32 in potash. According to the guarantees given there were 64 different formulae included from  $\frac{1}{4}$ - $\frac{1}{4}$ - $\frac{1}{8}$  to 10-5-1 furnishing from  $\frac{1}{4}$  of 1 per cent. to 10 per cent. ammonia,  $\frac{1}{4}$  of 1 per cent. to 12 per cent. available phosphoric acid and from  $\frac{1}{8}$  of 1 per cent. to 3 per cent. water soluble potash. The results of analyses showed the nitrogen to vary from .41 to 7.04, averaging 1.43 per cent.; the available phosphoric acid to vary from 4.04 to 15.49, averaging 8.79 per cent. and the potash ranged from .13 to 7.67, in a sample which exceeded its guarantee by 4.67 per cent., averaging 1.29 per cent.

There were 5 samples including 4 brands excluded from the foregoing low, high and average figures, namely, a liquid fertilizer, one being guaranteed to contain less than 1 per cent. of total plant food, selling at \$10.00 a ton, and another supplying only 3.50 per cent. phosphoric acid because they were manifestly dissimilar from the composition of the majority of the complete fertilizers analyzed. The majority of the samples analyzed contained less than 2 per cent. of potash there being 31 brands and 52 samples, carrying 2.00 per cent. potash and 11 brands and 21 samples, carrying 3.00 per cent. potash.

The average composition shows no marked differences over the averages for the two previous seasons although the selling prices, however, show marked variations ranging from \$22.00 to \$120.00, averaging \$38.59 a ton. In order that the values of the brands having like formulae may be compared the following selling prices will be of interest. In the formula 1-8-1, represented by the greatest number of brands and samples, the prices varied from \$31.00 to \$42.00, averaging \$33.71 a ton. The next formulae in point of number of samples analyzed were the 2-10-1 varying from \$30.00 to \$47.00 and averaging \$40.42 a ton and the 1-8-2 grade which ranged in price from \$33.00 to \$45.00, averaging \$38.79 a ton. For fertilizers supplying like amounts of plant food, therefore, differences in retail selling prices of \$11, \$17 and \$12 a ton respectively are noted. Similar variations in these prices existed in the remaining brands of like composition

where several were included. However, where only one or a few brands are represented the selling prices given cannot be considered as fairly representing these formulae goods as would be the case where an average of several brands and samples are shown. The results of the analyses secured on samples having like guarantees have been averaged and tabulated in the order of their contents of nitrogen, available phosphoric acid and potash and a study of the following table will show the prevailing average prices for the several similar brands of complete fertilizers sold during the Spring season. The lowest average retail price, excluding the brand containing less than 1 per cent. of plant food, was \$23.51 a ton for a  $\frac{1}{2}$ -6- $\frac{1}{2}$  grade and the highest average selling price, excepting the liquid fertilizer, also referred to, which in ton lots would exceed \$1,000, and where more than one sample was received, was \$67.00 a ton for a 4-10-3 grade. The formulae of the various brands as tabulated were determined by multiplying the guarantees for nitrogen by 1.2158 taking the figures thus obtained together with the guarantees for available phosphoric acid and potash.

Formula.	Number of brands.	Number of samples.	Nitrogen.	Phosphoric acid.	Potash.	Price.
1-1-1,	1	2	0.22	8.35	0.10	\$10 00
1-1-1,	1	1	0.41	8.35	0.37	23 51
1-6-2,	2	4	0.69	7.52	0.61	24 25
1-7-2,	2	2	0.74	6.92	0.47	24 48
1-8-1,	1	3	0.72	8.15	0.27	26 45
1-8-2,	4	11	0.68	8.38	0.72	29 62
1-8-1,	10	21	0.67	8.49	1.06	32 00
1-10-1,	2	3	0.63	11.07	0.93	31 98
1-7-1,	13	26	0.97	7.55	1.14	29 75
1-7-1 $\frac{1}{2}$ ,	1	1	0.77	7.31	1.71	42 28
1-7-3,	1	3	0.72	8.13	4.62	29 05
1-8-1,	2	5	1.13	7.99	0.62	31 42
1-8-1,	1	3	0.86	7.73	0.84	33 71
1-8-1,	35	67	0.98	8.57	1.04	36 04
1-8-1 $\frac{1}{2}$ ,	2	6	0.79	7.89	1.41	38 79
1-8-2,	14	23	1.10	8.54	2.06	34 24
1-9-1,	7	17	1.08	9.59	1.01	38 88
1-9-2,	1	2	0.96	9.65	2.27	47 25
1-9-3,	1	2	0.90	9.94	3.12	36 05
1-10-1,	14	21	0.97	10.27	1.11	36 38
1-12-1,	2	3	1.07	14.37	0.94	31 00
1-8-3,	1	2	1.30	7.62	0.82	32 00
1-8-1,	1	1	1.11	9.28	1.01	45 00
1-6-3,	1	1	1.08	8.46	3.42	37 26
1-8-1,	3	5	1.51	8.07	0.86	36 75
1-9-1,	1	2	1.43	9.33	1.14	44 67
1-9-3,	1	3	1.36	9.34	2.86	38 64
1-10-1,	11	16	1.36	10.38	1.21	40 00
1-3-3-1,	1	1	1.50	3.65	0.76	41 00
1-7-2,	1	1	1.52	7.08	1.48	34 25
1-8-1,	1	2	1.45	7.69	0.63	43 67
1-9-1,	1	3	1.81	7.94	1.26	1.67
2-6-2,	1	1	1.88	6.58	1.67	46 53
2-6-3,	1	3	1.70	7.41	2.96	38 83
2-7-1,	2	3	1.62	7.56	1.05	39 11
2-8-1,	7	13	1.70	8.34	1.25	45 50
2-8-2,	10	19	1.69	8.47	2.02	49 67
2-8-3,	4	6	1.69	8.52	2.95	

Formula.	Number of brands.	Number of samples.	Nitrogen.	Phosphoric acid.	Potash.	Price.
2-8 $\frac{1}{2}$ -1, -----	3	5	1.76	8.87	1.09	38 75
2-9-1, -----	14	21	1.80	9.31	1.11	41 56
2-10-1, -----	15	25	1.66	10.04	1.10	40 42
*2 $\frac{1}{2}$ -3-3, -----	1	1	2.10	3.35	3.14	70c pt.
2 $\frac{1}{2}$ -8-1, -----	8	11	2.14	8.49	1.12	43 98
2 $\frac{1}{2}$ -10-1, -----	4	6	2.24	10.02	1.15	42 94
3-7-1, -----	1	1	2.21	6.81	0.74	46 00
3-8-1, -----	4	6	2.55	7.71	1.22	52 06
3-8-2, -----	1	1	2.50	8.79	2.07	54 00
3-9-1, -----	6	7	2.44	9.32	1.11	48 71
3 $\frac{1}{2}$ -6-1, -----	1	1	2.60	8.05	1.34	45 00
3 $\frac{1}{2}$ -10-1, -----	1	1	2.94	10.40	1.28	70 00
4-2 $\frac{1}{2}$ -2, -----	1	1	3.22	2.62	0.52	70 00
4-6-2, -----	1	2	2.87	5.99	2.37	54.50
4-8-1, -----	1	1	3.48	8.24	1.03	49 00
4-8-2, -----	1	1	3.73	7.84	2.14	120 00
4-9-1, -----	2	4	3.24	9.61	1.03	53 56
4-10-3, -----	1	2	2.92	10.61	3.07	67 00
4 $\frac{1}{2}$ -8-1, -----	1	2	3.85	7.16	1.38	59 00
4 $\frac{1}{2}$ -5-1, -----	1	1	3.94	5.77	1.10	60 00
5-3-1, -----	1	1	3.72	4.04	1.62	50 50
5-6-1, -----	1	1	3.34	8.05	1.28	56 00
5-8-1, -----	3	6	3.68	8.81	1.25	58 17
5-9-2, -----	1	2	4.00	8.55	2.35	63 50
5 $\frac{1}{2}$ -3-1, -----	1	1	4.12	7.00	0.85	64.00
10-5-1, -----	1	1	7.04	6.38	1.65	-----
64 Totals, -----	241	420	1.43	8.79	1.29	\$38 59

\*Liquid fertilizer.

## NITROGEN AND PHOSPHORIC ACID FERTILIZERS.

### *Analyses in Table II.*

This group of fertilizers includes dissolved or acid treated bone and materials of like composition furnishing nitrogen and phosphoric acid in an available form. There were 519 samples analyzed including 268 brands, the output of 68 companies. The number of brands of this grade was greater than those of the Complete Fertilizers in which potash was supplied. One brand represented by 3 samples guaranteed for 11 per cent. total phosphoric acid instead of showing the available phosphoric was included in this group instead of being classed as Ground Bone Fertilizers, as the brand name would indicate, for the reason that they were, upon examination, found to be not straight ground bone but consisted of material including organic matter and bone residues. There were 52 samples of this class or 10 per cent. found to be deficient in nitrogen, 102 or 19.7 per cent. deficient in available phosphoric acid and 3 were deficient in total phosphoric acid as already referred to as not being guaranteed for available phosphoric acid, making a total of 157 samples or nearly

one-third of this class of fertilizers which were found to contain less nitrogen and phosphoric acid than claimed. The nitrogen varied from 0.29 to 5.66, averaging 1.63 per cent. and the available phosphoric acid varied from 5.48 to 15.44, averaging 9.95 per cent.

The retail selling prices ranged from \$18.65 in a brand guaranteed 1.23 per cent. nitrogen and 9 per cent. available phosphoric acid to \$110 in a brand guaranteed 3.29 per cent. nitrogen and 8 per cent. phosphoric acid and averaged \$33.22 a ton.

---

## GROUND BONE FERTILIZERS.

*Analyses in Table III.*

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There were 43 samples of raw and stamed ground bones guaranteed for nitrogen and total phosphoric acid received and analyzed including 30 brands registered by 25 different firms. Considerable variation was noted in their composition, the nitrogen varying from 1.30 to 4.79, averaging 3.22 per cent. and varying in total phosphoric acid from 19.10 to 29.61, averaging 23.06 per cent. In these fertilizers, as the availability of the nitrogen and phosphoric acid depends to a large extent on their degree of pulverization or fineness, determinations were made, as is customary, for that portion of the sample which would pass a 1-50th of an inch sieve. That portion which failed to pass this sized sieve mesh was classed as "coarse" and that portion sufficiently pulverized to pass the sieve was designated as "fine." The degrees of fineness thus determined varied from 24 to 89 and averaged 58 per cent. "fine."

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## ACIDULATED PHOSPHATE FERTILIZERS.

*Analyses in Table IV.*

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Two hundred and four samples of Acid Phosphate Fertilizers or dissolved phosphate rock are included representing 94 different brands registered by 51 manufacturing firms. Of this number there were 7 different grades guaranteed to contain from 8 to 16 per cent. available phosphoric acid. Over one-half the number or 113 being of this latter grade, 67 were 14 per cent., 4, 13 per cent., and 9, 12



per cent. acid phosphate, the remaining number having the lower guarantees. The results of analyses showed variation in available phosphoric acid of from 6.54 to 17.79, averaging 15.35 per cent. The retail selling prices showed also variations corresponding with the analyses and ranged from \$18.25 in a brand guaranteed 10 per cent. and analyzing 8.51 per cent. available phosphoric acid to \$30 in a 16 per cent. grade which analyzed 16.50 per cent. and averaged \$23.45 a ton. As will be noted by referring to the table, the variations in prices corresponded with their analysis although in several instances, the retail selling prices for the lower grade of materials were in excess of some of those carrying the higher amounts of available phosphoric acid. Of the total number of samples analyzed, 28 or 13.7 per cent. were deficient.

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## ROCK AND POTASH FERTILIZERS.

### *Analyses in Table V.*

---

Only 6 samples representing 4 different brands guaranteed to contain phosphoric acid in an available form together with potash, were received during the Spring season. They were guaranteed for from 7 to 12 per cent. available phosphoric acid and from 1 to 2 per cent. potash and analyzed from 7.30 to 9.61, averaging 8.61 per cent. and from 0.98 to 2.09, averaging 1.34 per cent. respectively. The prices charged in this class of materials, as represented by brands included, were from \$27.50 to \$35, averaging \$30.93 a ton. Of the total number analyzed, 4 or 66.7 per cent. were deficient in phosphoric acid, the potash guarantees being exceeded.

---

## MISCELLANEOUS FERTILIZERS.

### *Analyses in Table VI.*

---

There were 3 samples of Nitrate of Soda and 3 so called "Tankage and Bone Fertilizers" received during the year which were classified as Miscellaneous. There was practically no difference in the composition of Nitrate of Soda which averaged 16.17 per cent. total nitrogen and the 2 selling prices reported as being charged for these materials averaged \$102 a ton. The 3 samples of Tankage and Bone

Fertilizers were guaranteed to contain from 4.12 to 5.75 per cent. nitrogen and from 4.50 to 6.86 per cent. total phosphoric acid and upon analysis averaged 4.77 per cent. and 6.02 per cent. respectively. One of these was deficient in phosphoric acid. Two selling prices were reported which averaged \$46.50 a ton.

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### DEFICIENCIES.

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The samples of fertilizers considered as being deficient, as shown by analyses, were those where the percentages of nitrogen, available phosphoric acid, total phosphoric acid, where the available form was not guaranteed nor determined, and total water soluble potash, were found to be 0.2 per cent. less than the given guarantees. Where guarantees for nitrogen and potash were 0.50 per cent. or less, those analyzing 0.1 per cent. or more below these guarantees, were considered as being deficient. In the Tables showing the results of analyses, those samples found deficient are indicated by an asterisk (\*) being prefixed to the percentages obtained. The number of deficiencies found in the fertilizers selected during the period covered by this report was greatly in excess of those noted in recent preceding inspection seasons and numbered 330 or 27.5 per cent. of the total number analyzed. Of the 1,149 Complete, Nitrogen and Phosphoric Acid, Acidulated Phosphate and Rock and Potash Fertilizers, guaranteed for available phosphoric acid, 200 or 17.4 per cent. were deficient. Of the Nitrogen and Phosphoric Acid group, 3, not guaranteed for available phosphoric acid, were deficient in total. Of the 46 Ground Bone and 3 Miscellaneous Fertilizer samples, 11 and 1 respectively or 26.1 per cent. were found to be deficient. In the 420 Complete Fertilizers and 6 Rock and Potash Fertilizers supplying potash, there were 32 of the former class or 7.5 per cent. deficient. In those fertilizers carrying nitrogen, 86 out of the total of 988 samples or 8.7 per cent. analyzed less than guaranteed. The following Table will show the number of samples found deficient in nitrogen, available phosphoric acid and potash in each class of the fertilizers analyzed.

Classes of Fertilizers.	Number of samples.	Deficient in nitrogen.	Deficient in available phosphoric acid.	Deficient in potash.
Complete fertilizers, -----	420	31	66	32
Nitrogen and phosphoric acid fertilizers, -----	519	52	102	-----
Ground bone fertilizers, -----	43	3	*11	-----
Acidulated phosphate fertilizers, -----	204	-----	28	-----
Rock and potash fertilizers, -----	6	-----	4	-----
Miscellaneous fertilizers, -----	6	-----	*1	-----
Totals, -----	1,198	86	212	32

\*Total phosphoric acid.

## AVERAGE ANALYSES AND RETAIL PRICES.

In each group of the fertilizers received, with the exception of the few Miscellaneous samples, an average of the results of analyses and the retail prices has been estimated, and the figures thus obtained arranged in the following Table for comparison.

	Complete fertilizers.	Nitrogen and phosphoric acid fertilizers (dissolved bones, etc.)	Ground bone fertilizers.	Acidulated phosphate fertilizers.	Rock and potash fertilizers.
Number of samples, -----	420	519	43	204	6
Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Moisture, -----	7.18	7.11	5.24	7.43	5.14
Total nitrogen, -----	1.43	1.63	3.22	-----	-----
Total phosphoric acid, -----	10.23	11.42	23.06	16.14	10.57
Available phosphoric acid, -----	8.79	9.95	-----	15.35	8.61
Insoluble phosphoric acid, -----	1.44	1.47	-----	0.79	1.96
Potash, -----	1.29	-----	-----	-----	1.34
Mechanical analysis of bone:					
Fine, -----	-----	-----	58.00	-----	-----
Coarse, -----	-----	-----	42.00	-----	-----
Selling price, -----	\$38 59	\$33 22	\$50 21	\$23 45	\$30 93

The average composition of each group or class, as will be noted, by comparing this Table with those of recent passed season's reports, show no marked differences. The average nitrogen content of the Complete Fertilizers is slightly less than the average for the Spring of 1917, while the available phosphoric acid and potash averages remain practically constant. The most marked differences will be noted in the increases in the average retail selling prices. In order

that these values for this season may be compared with the three previous inspection seasons, the following average prices for each class of fertilizers are included in the respective following order: Fall 1916, Spring 1917, Fall 1917 and Spring 1918: Complete Fertilizers, \$24.97, \$28.33, \$30.26, \$38.59; Nitrogen and Phosphoric Acid Fertilizer, \$21.79, \$23.93, \$27.34, \$33.22; Ground Bone Fertilizers, \$37.45, \$38.80, \$43.58, \$50.21; Acidulated Phosphate Fertilizers, \$18.46, \$17.56, \$20.68, \$23.45; Rock and Potash Fertilizers, \$21.62, \$25.70, \$27.50 and \$30.93.

In a year's time, the increase in value over the average prices prevailing during the previous Spring season of 1917, where the analyses have been fairly constant, it will be noted that the retail selling prices for the several classes of fertilizers in the above order have increased \$10.26, \$9.29, \$11.41, \$5.89 and \$5.18 a ton respectively. Of the Miscellaneous Fertilizers there were 3 samples of Nitrate of Soda averaging 16.17 per cent. nitrogen and \$102 a ton, and 3 of Tankage and Bone Mixtures averaging 4.77 per cent. nitrogen, 6.02 per cent. total phosphoric acid and retailing at \$46.50 a ton.

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## KEY TO TABLES.

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All samples analyzed were given a chemist's number as shown in the extreme left and right hand columns.

Samples analyzed are grouped in alphabetical order of manufacturers' names and in these groupings brand names are shown in the same order.

The asterisk (\*) indicates the cases where total nitrogen, available phosphoric acid and total potash are deficient to the extent of .2 per cent. or more below their respective guarantees. In cases where the guarantees are .5 per cent. or less the deficiencies noted are where the amount is .1 per cent. or more below the guarantees.

Order of results of analysis: Moisture, Total Nitrogen found and guaranteed, Total Phosphoric Acid found and guaranteed; Available Phosphoric Acid found and guaranteed; Insoluble Phosphoric Acid found and guaranteed; Total Potash found and guaranteed. The Potash is shown as Muriate in the columns and those cases where Potash is present in part or in whole as Sulphate, a dagger at the bottom of the page shows the percentages of Potash in these forms.

To determine the formula of any brand, as guaranteed, multiply Total Nitrogen guaranteed by 1.2158 to obtain Ammonia and then use this figure and the guarantees for Available Phosphoric Acid and



Total Potash. For example, Nitrogen guarantee equals .82% (.82x-1.2158=1%.) Ammonia equals 1% Available Phosphoric Acid 8% Potash 1%. Formula therefore is 1-8-1.

Complete Fertilizers, Table I, furnishing Nitrogen, Phosphoric Acid and Potash.

Nitrogen and Phosphoric Acid Fertilizers, Table II, including Dissolved Bones and other like products.

Ground Bone Fertilizers, Table III, furnishing Nitrogen and Phosphoric Acid.

Acidulated Phosphate Fertilizers, Table IV, furnishing Phosphoric Acid.

Rock and Potash Fertilizers, Table V, furnishing Phosphoric Acid and Potash.

Miscellaneous Fertilizers, Table VI, including Nitrate of Soda and Tankage and Bone Fertilizers supplying Nitrogen and Phosphoric Acid.

TABLE NO. I.—  
Furnishing Nitrogen,

Chemist's number.

Name of Manufacturer and Brand.

Sample Taken From—

THE AMERICAN AGRICULTURAL  
CHEMICAL CO., NEW YORK, N. Y.

4500 All Crop Fish Guano, -----  
 4214 All Crop Fish Guano, -----  
 4752 Bradley's B. D. Sea Fowl Guano, 1916, ---  
 4469 Bradley's B. D. Sea Fowl Guano, 1916, ---  
 4501 Bradley's New Method Fertilizer, 1916, ---  
 3483 Bradley's New Method Fertilizer, 1916, ---  
 3871 Bradley's New Method Fertilizer, 1916, ---  
 3825 Bradley's Special Tobacco Manure, 1916, ---  
 4498 Bradley's Unicorn, 1916, -----  
 4358 Bradley's Unicorn, 1916, -----  
 3971 Canton Chemical Bakers Fish Guano, 1916, ---  
 3725 Canton Chemical Bakers Special Wheat,  
 Corn and Grass Mixture, 1916, -----  
 4528 Canton Chemical Bakers Special Wheat,  
 Corn and Grass Mixture, 1916, -----  
 4302 Canton Chemical Baker's Special Wheat,  
 Corn and Grass Mixture, 1916, -----  
 4529 Canton Chemical Baker's Standard High  
 Grade Guano, 1916, -----  
 4352 Canton Chemical Potato and Vegetable  
 Manure, 1916, -----  
 3970 Canton Chemical Resurgam Guano, 1916, ---  
 4499 Complete Potato Mixture, -----  
 4492 Complete Potato Mixture, -----  
 3314 Crocker's Complete Manure, 1916, -----  
 4236 Crocker's Complete Manure, 1916, -----  
 3867 Crocker's Complete Manure, 1916, -----  
 4655 Crocker's General Crop Fertilizer, -----  
 4643 Crocker's Harvest Jewell Fertilizer, 1916, ---  
 3956 Crocker's Universal Grain Grower, 1916, ---  
 4651 Crocker's Wheat and Corn Fertilizer, 1916, ---  
 3575 Dead Shot Phosphate, 1916, -----  
 4034 Detrick's Corn and Oats Fertilizer, 1916, ---  
 4624 Detrick's Corn and Oats Fertilizer, 1916, ---  
 3470 Detrick's Corn and Oats Fertilizer, 1916, ---  
 4008 Eagle Phosphate, -----

W. J. Bone, Gravity, -----  
 I. G. Williams, Ariel, -----  
 J. H. Campbell, Burlington, -----  
 A. L. Miller, Edella, -----  
 W. J. Bone, Gravity, -----  
 George Ifft & Sons, Evans City, -----  
 Putman & Parker, Columbus, -----  
 W. W. Gible, Brunnersville, -----  
 W. J. Bone, Gravity, -----  
 U. E. Rhein, Rock, -----  
 S. Carl Garner, Hatboro, -----  
 H. F. Gump & Son, Everett, -----  
 King Brothers, Uniontown, -----  
 Stultz Brothers, Hollidaysburg, -----  
 King Brothers, Uniontown, -----  
 I. E. Mengle, Mahanoy City, -----  
 Carl Garner, Hatboro, -----  
 W. J. Bone, Gravity, -----  
 Farmers Supply Co., Ariel, -----  
 T. R. Bolton, Cochranston, -----  
 Gibson Clark Co., Indiana, -----  
 E. D. Everts, Warren, -----  
 L. A. Fischer & Co., Bradford, -----  
 D. & W. R. Davis, Kane, -----  
 Hauck & Henry, New Berlinville, -----  
 John Abbott, Sugar Grove, -----  
 S. A. Fishburn, Penbrook, -----  
 A. M. Anstine, Glen Rock, -----  
 Newton Gouder, Boswell, -----  
 Thompson & Glenn, Butler, -----  
 A. H. Keeley & Sons, Schwenksville, -----

## COMPLETE FERTILIZERS.

## Phosphoric Acid and Potash.

ANALYSIS OF FERTILIZERS CONTAINING NITROGEN, PHOSPHORIC ACID, AND POTASH.												
Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
8.20	*0.98	1.23	12.63	11.00	10.40	10.00	2.23	1.00	†1.07	1.00	37 00	4500
9.20	1.16	1.23	11.67	11.00	10.08	10.00	1.59	1.00	†1.34	1.00	37 00	4214
9.12	0.94	0.82	11.05	11.00	10.18	10.00	0.87	1.00	†1.00	1.00	37 00	4752
7.51	0.76	0.82	12.62	11.00	11.28	10.00	1.34	1.00	†1.07	1.00	34 00	4469
7.50	0.78	0.82	10.18	9.00	9.06	8.00	1.12	1.00	†1.18	1.00	34 00	4501
7.68	0.92	0.82	10.88	9.00	9.53	8.00	1.35	1.00	*†0.80	1.00	36 00	3483
4.16	0.83	0.82	11.43	9.00	9.50	8.00	1.93	1.00	*0.78	1.00	36 00	3871
6.74	*4.12	4.53	7.05	4.00	7.00	3.00	0.05	1.00	†0.85	1.00	64 00	3825
7.18	1.50	1.65	11.34	10.00	9.91	9.00	1.43	1.00	†1.07	1.00	40 00	4498
4.36	1.84	1.65	10.55	10.00	8.82	9.00	1.73	1.00	†1.06	1.00	39 00	4358
6.96	2.13	1.65	10.97	10.00	9.18	9.00	1.79	1.00	1.08	1.00	42 50	3971
5.97	1.27	0.82	10.55	10.00	9.48	9.00	1.07	1.00	0.85	1.00	-----	3725
3.61	1.00	0.82	11.61	10.00	9.95	9.00	1.66	1.00	†0.92	1.00	37 50	4528
7.12	0.85	0.82	10.33	10.00	9.67	9.00	0.66	1.00	†1.03	1.00	36 00	4302
4.79	*1.78	2.06	8.93	9.00	7.90	8.00	1.03	1.00	†1.16	1.00	46 00	4529
8.30	1.25	1.23	12.08	11.00	11.10	10.00	0.98	1.00	†1.19	1.00	-----	4352
8.40	1.09	0.82	11.54	11.00	10.14	10.00	1.40	1.00	1.00	1.00	37 00	3970
9.23	*2.98	3.29	12.12	11.00	10.81	10.00	1.31	1.00	†2.98	3.00	64 00	4499
8.94	*2.85	3.29	11.39	11.00	10.40	10.00	0.99	1.00	†3.16	3.00	70 00	4492
7.50	0.95	0.82	12.46	11.00	10.04	10.00	2.42	1.00	†1.30	1.00	33 75	3314
5.86	0.86	0.82	11.29	11.00	10.15	10.00	1.14	1.00	†1.03	1.00	38 00	4236
6.42	0.98	0.82	11.33	11.00	*9.70	10.00	1.63	1.00	†0.97	1.00	40 00	3867
3.17	1.00	0.82	9.31	8.00	7.79	7.00	1.52	1.00	†1.17	1.00	37 00	4655
7.06	1.60	1.65	11.25	10.00	8.95	9.00	2.30	1.00	†0.91	1.00	48 00	4643
8.80	0.99	0.82	9.72	9.00	8.60	8.00	1.12	1.00	†0.88	1.00	33 00	3956
4.90	2.28	2.06	9.43	9.00	8.04	8.00	1.39	1.00	†1.03	1.00	45 00	4651
7.76	0.76	0.41	9.04	9.00	8.24	8.00	0.80	1.00	†1.04	1.00	29 50	3575
5.86	0.97	0.82	11.31	10.00	9.52	9.00	1.79	1.00	†1.25	1.00	32 25	4034
8.45	1.00	0.82	9.73	10.00	9.22	9.00	0.51	1.00	†1.39	1.00	-----	4624
6.21	1.44	0.82	12.42	10.00	10.51	9.00	1.91	1.00	†0.96	1.00	35 00	3470
5.85	1.03	0.82	8.24	8.00	7.47	7.00	0.77	1.00	†0.88	1.00	35 00	4008

\*Deficient.

†No. 4500 As muriate, 0.53%; as sulphate, 0.54%.

†No. 4214 As sulphate, 1.34%.

†No. 4752 As sulphate, 1.00%.

†No. 4469 As sulphate, 1.07%.

†No. 4501 As muriate, 0.57%; as sulphate, 0.61%.

†No. 3483 As muriate, 0.43%; as sulphate, 0.37%.

†No. 3825 As sulphate, 0.85%.

†No. 4498 As sulphate, 1.07%.

†No. 4358 As muriate, 0.87%; as sulphate, 0.19%.

†No. 4528 As sulphate, 0.92%.

†No. 4302 As sulphate, 1.03%.

†No. 4529 As muriate, 0.69%; as sulphate, 0.47%.

†No. 4352 As muriate, 0.49%; as sulphate, 0.70%.

†No. 4499 As muriate, 2.30%; as sulphate, 0.68%.

†No. 4492 As muriate, 1.68%; as sulphate, 1.48%.

†No. 3314 As sulphate, 1.30%.

†No. 4236 As muriate, 0.62%; as sulphate, 0.41%.

†No. 3867 As sulphate, 0.97%.

†No. 4655 As sulphate, 1.17%.

†No. 4643 As sulphate, 0.91%.

†No. 3956 As sulphate, 0.88%.

†No. 4651 As muriate, 0.64%; as sulphate, 0.39%.

†No. 3575 As muriate, 0.64%; as sulphate, 0.40%.

†No. 4034 As muriate, 0.85%; as sulphate, 0.40%.

†No. 4624 As muriate, 0.83%; as sulphate, 0.56%.

†No. 3470 As sulphate, 0.96%.

†No. 4008 As muriate, 0.59%; as sulphate, 0.29%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3762	East India Economizer Phosphate, 1916,	R. J. Dunham, Wellsboro, -----
4550	W. S. Farmer & Co. Harvest Queen, 1916,	W. R. McCartney, Farmington, -----
3649	General Crop Grower, 1916, -----	Joseph C. Froehlich, Mountville Borough, ---
3460	Great Eastern Northern Corn Special, 1916,	W. J. Johnson, Sinking Springs, -----
3461	Great Eastern Vegetable, Vine and Tobacco Fertilizer, 1916, -----	W. J. Johnson, Sinking Springs, -----
4351	Maryland O. K. Ammoniated Fertilizer, 1916, -----	Howard Deitrick, Kempton, -----
3349	Matchless Potash Manure, -----	Edward Brinton & Sons, West Chester, ---
3326	Michigan Carbon Red Line Complete Manure, -----	F. E. Hyde, Spartansburg, -----
3424	Milsom's Erie King Fertilizer, -----	E. J. Rogers, Emporium, -----
3336	Milsom's Potato and Cabbage Manure, 1916, -----	F. K. Dawdy, North East, -----
4122	Milsom's Potato and Cabbage Manure, 1916, -----	McConnell & Watterson, Kittanning, ---
3423	Milsom's Special Buffalo Guano, -----	E. J. Rogers, Emporium, -----
4114	Milsom's Wheat, Oats and Barley Fertilizer, 1916, -----	Keil Hardware Co., Sharpsburg, -----
3422	Milsom's Wheat, Oats and Barley Fertilizer, 1916, -----	E. J. Rogers, Emporium, -----
3540	Milsom's Wheat, Oats and Barley Fertilizer, 1916, -----	Aaron Zimmerman, Lehighton, -----
4838	Maro-Phillips Farmers Potato Mixture, 1916, -----	Samuel T. Hillpot, Quakertown, -----
3316	North Western Complete Compound, 1916,	Clyde D. Dufford, Oil City, -----
3318	North Western Diamond Potash Mixture, 1916, -----	Clyde D. Dufford, Oil City, -----
3912	Odorless Grass and Lawn Top Dressing Revised, -----	L. C. Thompson, Pottsville, -----
4067	Packer's Union Animal Corn Fertilizer, 1916, -----	F. E. Plummer, Wilmore, -----
4068	Packer's Union Potato Manure, 1916, -----	F. E. Plummer, Wilmore, -----
4069	Packer's Union Superior Crop Grower, 1916, -----	F. E. Plummer, Wilmore, -----
4490	Read's Corn, Wheat and Rye, 1916, -----	Farmers Supply Co., Ariel, -----
4799	Read's Corn, Wheat and Rye, 1916, -----	George Spangenburg, East Stroudsburg, ---
4822	Reese's Potato Manure, 1916, -----	J. F. Stoneback, Springtown, -----
4844	Royal Potash Mixture, -----	A. C. Snyder, Kellers Church, -----
4272	Sharpless & Carpenter's Farmers Brand Phosphate, 1916, -----	J. W. Craft, Ambler, -----
3925	Sharpless & Carpenter's Fish Guano, 1916,	J. Kunkle & Son, Orwigshurg, -----
3341	Sharpless & Carpenter's Fish Guano, 1916,	Jos. R. Taggart, Norristown, -----

## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
8.33	1.18	0.82	9.91	9.00	8.00	8.00	1.91	1.00	†1.31	1.00	31 85	3762
5.75	1.42	1.23	11.49	11.00	10.42	10.00	1.07	1.00	†1.76	1.00	41 00	4550
4.79	2.64	1.65	12.21	10.00	9.95	9.00	2.26	1.00	†1.24	1.00	36 00	3649
9.33	2.11	2.06	9.99	9.00	8.41	8.00	1.58	1.00	1.12	1.00	40 00	3460
10.87	1.90	2.06	11.63	11.00	10.07	10.00	1.56	1.00	*†0.78	1.00	42 00	3461
6.97	1.03	0.82	9.41	9.00	8.98	8.00	0.43	1.00	†1.07	1.00	-----	4351
9.20	1.76	1.65	9.40	9.00	8.69	8.00	0.71	1.00	†2.27	2.00	50 00	3349
7.85	1.29	0.82	10.14	9.00	8.89	8.00	1.25	1.00	†1.00	1.00	33 00	3326
4.55	1.10	0.82	8.76	8.00	7.45	7.00	1.31	1.00	†0.99	1.00	37 25	3424
8.21	1.08	0.82	12.18	11.00	10.92	10.00	1.26	1.00	†0.98	1.00	35 00	3336
6.81	0.90	0.82	11.80	11.00	10.28	10.00	1.52	1.00	†1.15	1.00	45 00	4122
8.17	0.89	0.82	11.10	11.00	*9.44	10.00	1.66	1.00	†1.04	1.00	37 00	3423
4.65	0.95	0.82	10.73	9.00	10.19	8.00	0.54	1.00	†1.12	1.00	42 00	4114
5.43	1.03	0.82	8.60	9.00	*7.26	8.00	1.34	1.00	†1.00	1.00	35 50	3422
7.51	1.08	0.82	9.77	9.00	8.80	8.00	0.97	1.00	†1.22	1.00	-----	3540
7.30	1.13	1.23	11.94	11.00	10.74	10.00	1.20	1.00	0.91	1.00	36 00	4838
6.07	0.98	0.82	10.41	9.00	9.07	8.00	1.34	1.00	†0.83	1.00	34 00	3316
9.75	*1.06	1.65	12.09	11.00	10.34	10.00	1.75	1.00	†1.17	1.00	35 75	3318
10.06	3.94	3.91	8.74	6.00	5.77	5.00	2.97	1.00	1.10	1.00	60 00	3912
9.91	1.77	1.65	11.11	11.00	9.83	10.00	1.28	1.00	†1.12	1.00	41 80	4067
10.76	2.02	2.06	10.94	11.00	10.05	10.00	0.89	1.00	1.08	1.00	44 65	4068
9.63	1.25	0.82	11.35	11.00	9.90	10.00	1.45	1.00	†1.00	1.00	35 15	4069
7.84	1.48	1.65	10.98	10.00	10.01	9.00	0.97	1.00	†1.00	1.00	40 00	4490
8.91	1.59	1.65	10.80	10.00	9.35	9.00	1.45	1.00	†1.22	1.00	45 00	4799
8.32	1.58	1.65	11.54	11.00	10.24	10.00	1.30	1.00	1.19	1.00	40 50	4822
5.62	1.06	0.82	8.98	9.00	8.42	8.00	0.56	1.00	*1.24	2.00	38 00	4844
8.41	1.04	0.82	11.39	11.00	10.73	10.00	0.66	1.00	†1.10	1.00	37 00	4272
8.94	2.35	2.06	9.49	9.00	8.35	8.00	1.14	1.00	†1.93	1.00	44 00	3925
8.73	2.05	2.06	8.95	9.00	*7.66	8.00	1.29	1.00	1.02	1.00	45 00	3341

\*Deficient.

†No. 3762 As sulphate, 1.31%.  
†No. 4550 As muriate, 0.70%; as sulphate, 1.06%.  
†No. 3649 As muriate, 0.81%; as sulphate, 0.43%.  
†No. 3461 As muriate, 0.67%; as sulphate, 0.11%.  
†No. 4351 As sulphate, 1.07%.  
†No. 3349 As muriate, 1.24%; as sulphate, 1.03%.  
†No. 3326 As sulphate, 1.00%.  
†No. 3424 As sulphate, 0.99%.  
†No. 3336 As sulphate, 0.98%.  
†No. 4122 As muriate, 0.81%; as sulphate, 0.34%.  
†No. 3423 As muriate, 0.62%; as sulphate, 0.42%.  
†No. 4114 As sulphate, 1.12%.  
†No. 3422 As muriate, 0.52%; as sulphate, 0.48%.  
†No. 3540 As muriate, 0.52%; as sulphate, 0.70%.  
†No. 3316 As sulphate, 0.83%.  
†No. 3318 As sulphate, 1.17%.  
†No. 4067 As muriate, 0.89%; as sulphate, 0.23%.  
†No. 4069 As muriate, 0.84%; as sulphate, 0.16%.  
†No. 4490 As sulphate, 1.00%.  
†No. 4799 As muriate, 0.74%; as sulphate, 0.48%.  
†No. 4272 As muriate, 0.58%; as sulphate, 0.52%.  
†No. 3925 As muriate, 1.31%; as sulphate, 0.62%.



TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3342	Sharpless & Carpenter's No. 1 Brand Phosphate, 1916, -----	Jos. R. Taggart, Norristown, -----
3952	Sharpless & Carpenter's Potato, Corn and Truck Guano, 1916, -----	Samuel Hummel, Monterey, -----
3911	Sharpless & Carpenter's Potato, Corn and Truck Guano, 1916, -----	L. C. Thompson, Pottsville, -----
4883	Sharpless & Carpenter's Royal Spring Mixture, 1916, -----	Edwin H. Peters, Slatington, -----
3926	Sharpless & Carpenter's Soluble Tampico Guano, 1916, -----	J. Kunkle & Son, Orwigsburg, -----
3599	Southern Fertilizer Co.'s Wheat, Corn and Grass Grower, 1916, -----	Frederick Druck, Wrightsville, -----
3793	Special Complete Fertilizer, -----	Collins & Mattern, Warriors Mark, -----
4570	Special Complete Fertilizer, -----	Edgar C. Gordon, Waynesburg, -----
4591	Susquehanna XXV Phosphate, -----	H. L. Carver, Berlin, -----
4213	Wheeler's Corn Fertilizer, 1916, -----	John F. Sayer, Moscow, -----
4212	Wheeler's Potato Manure, 1916, -----	John F. Sayer, Moscow, -----
4804	Williams & Clark's Americus Potato Manure, 1916, -----	F. X. Malerowski, Snyder'sville, -----
4376	Williams & Clark's Elk Brand, 1916, -----	F. H. Houseknecht, Seybertsville, -----
3862	Williams & Clark's Prolific Fertilizer, -----	Gallup Hardware Co., Port Allegany, -----
4111	Zell's Economizer Phosphate, 1916, -----	D. A. Hankey, Parnassus, -----
3860	Zell's Hustler Phosphate, 1916, -----	N. H. Yearick, Nittany, -----
3617	Zell's Special Compound for Potato and Vegetable, 1916, -----	O. F. Arnold, Dillsburg, -----
AMERICAN FERTILIZER COMPANY, BALTIMORE, MD.		
4137	American Fish and Bone Compound, -----	Lancaster County Farmers Assn., Manheim, -----
4007	American Reliable Guano, -----	A. K. Kulp, Pottstown, -----
3312	American Reliable Guano, -----	W. C. Work & Son, Cochranton, -----
3242	American Reliable Guano, -----	N. R. Yost, Myerstown, -----
3241	Ammoniated Crop Compound, -----	N. R. Yost, Myerstown, -----
ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.		
3981	Crop Grower, -----	Sellers Hoffman, Chadds Ford, -----
3309	Crop Grower, -----	J. H. Lavery's Sons, Franklin, -----
4354	Crop Grower, -----	Luckenbill & Heffner, Friedensburg, -----
4584	Grain Grower, -----	Jefferson Altfather, Berlin, -----
3963	Grain Grower, -----	W. E. Ervin, Somerton, -----
4082	Grain Grower, -----	A. S. Kelly, Ebensburg, -----
3357	Wheat, Corn and Oats (Special), -----	F. E. Bailey, Northbrook, -----

## FERTILIZERS—Continued.

FERTILIZERS—Continued.												
Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
6.67	1.91	1.65	10.51	10.00	*8.60	9.00	1.91	1.00	1.02	1.00	42 00	3342
10.18	1.37	1.23	11.90	11.00	10.80	10.00	1.10	1.00	†1.02	1.00	36 00	3952
13.02	1.45	1.23	12.28	11.00	10.30	10.00	1.98	1.00	†1.17	1.00	45 00	3911
4.00	0.83	0.82	9.67	9.00	8.87	8.00	0.80	1.00	0.85	1.00	32 50	4883
9.06	*3.05	3.20	10.88	10.00	9.52	9.00	1.36	1.00	1.01	1.00	55 00	3926
7.01	1.98	1.65	11.51	10.00	9.69	9.00	1.82	1.00	†1.17	1.00	-----	3599
7.77	1.13	0.82	9.80	9.00	8.37	8.00	1.43	1.00	*†1.21	2.00	-----	3793
4.79	0.64	0.82	9.01	9.00	*7.61	8.00	1.40	1.00	†2.03	2.00	45 00	4570
7.76	0.85	0.82	9.34	9.00	8.43	8.00	0.91	1.00	†1.11	1.00	-----	4591
10.47	1.49	1.65	12.16	11.00	10.35	10.00	1.81	1.00	†1.01	1.00	30 00	4213
10.88	2.16	2.06	12.04	11.00	10.18	10.00	1.86	1.00	†1.06	1.00	37 00	4212
7.26	2.03	2.06	10.98	9.00	9.47	8.00	1.51	1.00	†0.91	1.00	39 75	4804
8.21	0.84	0.82	10.84	11.00	9.97	10.00	0.87	1.00	†1.24	1.00	35 00	4376
6.28	0.93	0.82	10.55	8.00	9.50	7.00	1.05	1.00	†0.83	1.00	36 75	3862
6.93	1.44	0.82	10.00	9.00	9.06	8.00	0.94	1.00	†0.94	1.00	35 00	4111
7.05	0.83	0.82	12.37	11.00	10.27	10.00	2.10	1.00	†1.24	1.00	28 00	3800
7.95	2.34	2.47	10.54	10.00	9.09	9.00	1.45	1.00	†1.24	1.00	43 80	3617
7.61	1.52	1.65	10.23	9.00	8.27	8.00	1.96	1.00	3.22	3.00	33 50	4137
6.02	1.11	0.82	9.68	9.00	8.37	8.00	1.31	1.00	†1.27	1.00	35 00	4007
7.47	1.13	0.82	9.36	9.00	8.30	8.00	1.06	1.00	†1.09	1.00	34 75	3312
8.08	0.98	0.82	9.12	9.00	8.11	8.00	1.01	1.00	1.02	1.00	32 00	3242
8.55	0.95	0.82	9.63	9.00	8.18	8.00	1.45	1.00	2.44	2.00	37 50	3241
7.01	0.80	0.82	8.85	8.50	7.94	8.00	0.91	0.50	†1.86	2.00	-----	3981
6.92	1.09	0.82	8.92	8.50	*7.45	8.00	1.47	0.50	†1.94	2.00	41 26	3309
5.24	0.93	0.82	9.04	8.50	*7.70	8.00	1.34	0.50	†2.02	2.00	37 00	4354
7.21	*1.40	1.65	10.20	8.50	*7.78	8.00	2.42	0.50	†1.92	2.00	40 00	4585
6.87	1.78	1.65	9.72	8.50	7.87	8.00	1.85	0.50	*†1.78	2.00	49 00	3963
5.87	1.83	1.65	10.10	8.50	*7.80	8.00	2.30	0.50	†1.97	2.00	46 00	4082
6.16	1.08	0.82	7.91	7.50	*6.67	7.00	1.24	0.50	†1.20	1.00	32 00	3357

## \*Deficient.

†No. 3952 As muriate, 0.64%; as sulphate, 0.38%.  
†No. 3911 As sulphate, 1.17%.  
†No. 3599 As sulphate, 1.17%.  
†No. 3793 As sulphate, 1.21%.  
†No. 4570 As muriate, 0.93%; as sulphate, 1.10%.  
†No. 4591 As muriate, 0.70%; as sulphate, 0.41%.  
†No. 4213 As sulphate, 1.01%.  
†No. 4212 As sulphate, 1.06%.  
†No. 4804 As muriate, 0.72%; as sulphate, 0.19%.  
†No. 4376 As sulphate, 1.24%.  
†No. 3862 As sulphate, 0.83%.  
†No. 4111 As muriate, 0.72%; as sulphate, 0.22%.  
†No. 3800 As muriate, 0.77%; as sulphate, 0.47%.  
†No. 3617 As sulphate, 1.24%.  
†No. 4007 As muriate, 1.01%; as sulphate, 0.26%.  
†No. 3312 As muriate, 0.29%; as sulphate, 0.80%.  
†No. 3981 As muriate, 0.51%; as sulphate, 1.35%.  
†No. 3309 As muriate, 1.16%; as sulphate, 0.78%.  
†No. 4354 As muriate, 1.34%; as sulphate, 0.68%.  
†No. 4585 As muriate, 1.22%; as sulphate, 0.70%.  
†No. 3963 As muriate, 1.55%; as sulphate, 0.23%.  
†No. 4082 As muriate, 1.67%; as sulphate, 0.30%.  
†No. 3357 As muriate, 0.89%; as sulphate, 0.31%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.		Sample Taken From—	
4234	Wheat, Corn and Oats (Special), -----		Frank Douglass, Indiana, -----	
4776	Wheat, Corn and Oats (Special), -----		C. B. Tyler, Meshoppen, -----	
	BALTIMORE PULVERIZING COMPANY, -----			
	BALTIMORE, MD. -----			
3991	Special Potato Mixture, -----		Cecil Reynolds, Oxford, -----	
	BAUGH & SONS COMPANY, PHILADEL- -----			
	PHIA, PA. -----			
4054	Baugh's Ammoniated Soluble Alkaline, --		Briggs Brothers, Mt. Union, -----	
3787	Baugh's Ammoniated Soluble Alkaline, --		A. W. Eves, Millville, -----	
3168	Baugh's Ammoniated Soluble Alkaline, --		M. J. Sheffer, Hanover, -----	
4737	Baugh's Animal Base and Potash Com- -----			
	pound, -----			
3555	Baugh's Animal Base and Potash Com- -----		J. M. Ayres, Towanda, -----	
	pound, -----			
3387	Baugh's Complete Animal Base Fertilizer, -----		Rauch & Swartzel, Clearfield, -----	
3180	Baugh's Double Eagle Phosphate, -----		E. H. Keen & Co., Parkesburg, -----	
3600	Baugh's Double Eagle Phosphate, -----		H. D. & J. F. Bream, Gettysburg, -----	
3975	Baugh's Double Eagle Phosphate, -----		Brillinger & Swartz, Emigsville, -----	
3602	Baugh's Durable Plant Food, -----		J. Walter Jones, Clifton, -----	
4150	Baugh's Durable Plant Food, -----		Brillinger & Swartz, Emigsville, -----	
4598	Baugh's General Crop Grower for All -----		Meno Graybill & Sons, Bareville, -----	
	Crops, -----			
4332	Baugh's General Crop Grower for All -----		S. S. Baer, Sand Patch, -----	
	Crops, -----			
4420	Baugh's General Crop Grower for All -----		Grazier Brothers, Warriors Mark, -----	
	Crops, -----			
3958	Baugh's High Grade Potato Grower, -----		J. H. Sheaffer, Greason, -----	
	"Big Potato Brand," -----			
3974	Baugh's Potato and Truck Special for -----		W. E. Ervin, Somerton, -----	
	all Truck Crops, -----			
4055	Baugh's Special Potato Manure, -----		R. C. Hoopes Est., Lansdowne, -----	
4076	Baugh's Special Potato Manure, -----		Briggs Brothers, Mt. Union, -----	
3239	Baugh's Special Potato Manure, -----		Edwards Hardware Co., Ebensburg, -----	
			A. G. Sellers, Annville, -----	
	BOWKER FERTILIZER COMPANY, SUB- -----			
	SIDIARY OF AMERICAN AGRICUL- -----			
	TURAL CHEMICAL COMPANY, NEW -----			
	YORK, N. Y. -----			
4299	Bowker's Hill and Drill Phosphate, 1916, -----		H. L. Stultz & Brother, Altoona, -----	
3561	Bowker's Lawn and Garden Dressing, 1918, -----		Hibner Hoover Hardware Co., DuBois, -----	
3226	Bowker's Lawn and Garden Dressing, 1918, -----		Reynoldsville Hardware Co., Reynoldsville, -----	
3434	Bowker's Potato Phosphate, 1916, -----		Bunker & Burdick, Millport, -----	
3844	Bowker's Potato Phosphate, 1916, -----		C. Grog, Rldgway, -----	



## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.				
%	%	%	%	%	%	%	%	%	%	%	\$	
4.29	0.76	0.82	7.36	7.50	6.99	7.00	0.37	0.50	†1.15	1.00	33 00	4234
4.97	1.08	0.82	9.12	7.50	7.55	7.00	1.57	0.50	†1.12	1.00	33 00	4776
5.66	1.53	1.64	12.08	7.50	8.48	7.00	3.60	0.50	1.07	1.00	39 50	3991
9.84	0.80	0.41	8.29	8.00	*7.69	8.00	0.60	-----	0.63	0.50	28 00	4054
8.83	0.76	0.41	9.07	8.00	7.86	8.00	1.21	-----	0.60	0.50	26 00	3787
8.75	0.76	0.41	9.45	8.00	8.25	8.00	1.19	-----	0.86	0.50	26 00	3168
9.62	1.84	1.65	10.70	9.00	9.58	9.00	1.12	-----	†1.14	1.00	40 00	4737
8.69	1.68	1.65	10.19	9.00	*8.52	9.00	1.67	-----	†1.06	1.00	44 00	3555
7.32	1.88	1.65	11.42	10.00	10.08	10.00	1.34	-----	†0.88	1.00	38 50	3387
8.01	2.17	1.65	10.96	8.50	8.73	8.50	2.23	-----	†1.29	1.00	38 00	3180
9.41	1.76	1.65	10.73	8.50	8.33	8.00	2.40	-----	†1.19	1.00	39 00	3600
8.95	1.75	1.65	11.44	8.50	10.19	8.50	1.25	-----	†1.00	1.00	40 00	3975
8.76	*1.37	1.65	10.37	8.00	8.61	8.00	1.76	-----	*1.74	2.00	44 00	3602
4.87	1.88	1.65	11.15	8.00	9.30	8.00	1.85	-----	†1.87	2.00	43 00	4150
8.97	1.01	0.82	9.58	8.00	8.05	8.00	1.53	-----	1.10	1.00	32 25	4598
6.61	0.95	0.82	8.81	8.00	8.10	8.00	0.71	-----	†1.05	1.00	31 00	4332
6.70	0.93	0.82	9.53	8.00	8.84	8.00	0.69	-----	†1.09	1.00	-----	4420
4.31	3.48	3.30	9.59	8.00	8.24	8.00	1.35	-----	†1.03	1.00	49 00	3958
11.82	2.94	2.88	12.07	10.00	10.40	10.00	1.67	-----	†1.28	1.00	70 00	3974
10.56	1.48	1.65	11.60	10.00	10.01	10.00	1.59	-----	†1.10	1.00	44 00	4055
10.33	1.50	1.65	11.25	10.00	10.06	10.00	1.19	-----	†1.16	1.00	42 00	4076
8.60	2.09	1.65	11.19	10.00	10.13	10.00	1.06	-----	1.36	1.00	40 50	3239
7.77	2.34	2.47	10.92	10.00	9.85	9.00	1.07	1.00	†1.14	1.00	54 00	4299
7.58	2.43	2.47	22.22	9.00	*6.63	8.00	15.59	1.00	†1.34	1.00	65 00	3561
7.90	2.64	2.47	22.27	9.00	*7.09	8.00	15.18	1.00	†1.22	1.00	50 00	3226
9.15	1.65	1.65	11.48	11.00	*9.57	10.00	1.91	1.00	†1.06	1.00	47 00	3434
8.77	1.64	1.65	11.44	11.00	*9.69	10.00	1.75	1.00	†1.09	1.00	47 00	3844

## \*Deficient.

†No. 4234 As muriate, 0.95%; as sulphate, 0.20%.  
†No. 4776 As muriate, 0.92%; as sulphate, 0.20%.  
†No. 4737 As sulphate, 1.14%.  
†No. 3555 As muriate, 0.38%; as sulphate, 0.68%.  
†No. 3387 As muriate, 0.49%; as sulphate, 0.39%.  
†No. 3180 As muriate, 0.59%; as sulphate, 0.70%.  
†No. 3600 As muriate, 0.57%; as sulphate, 0.62%.  
†No. 3975 As muriate, 0.64%; as sulphate, 0.36%.  
†No. 4150 As muriate, 1.10%; as sulphate, 0.77%.  
†No. 4332 As sulphate, 1.05%.  
†No. 4420 As sulphate, 1.09%.  
†No. 3958 As muriate, 0.67%; as sulphate, 0.36%.  
†No. 3974 As muriate, 0.64%; as sulphate, 0.64%.  
†No. 4055 As sulphate, 1.10%.  
†No. 4076 As sulphate, 1.16%.  
†No. 4299 As muriate, 0.81%; as sulphate, 0.33%.  
†No. 3561 As sulphate, 1.34%.  
†No. 3226 As muriate, 0.89%; as sulphate, 0.33%.  
†No. 3434 As sulphate, 1.06%.  
†No. 3844 As muriate, 0.85 %; as sulphate, 0.24%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4117	Bowker's Potato Phosphbte, 1916, -----	L. Todd Owens, Apollo, -----
4792	Bowker's Staple Phosphate, 1916, -----	W. M. Halteman, Analomink, -----
4544	Bowker's Staple Phosphate, 1916, -----	C. S. Hunter Co., Washington, -----
3481	Bowker's Staple Phosphate, 1916, -----	Mars Milling & Feed Co., Mars, -----
4565	Bowker's Sure Crop Phosphate, 1916, -----	W. H. McPeak, Hickory, -----
4289	Bowker's Sure Crop Phosphate, 1916, -----	H. J. Mosteller, Glen Moore, -----
4751	Bowker's Sure Crop Phosphate, 1916, -----	W. H. Spaulding & Son, Troy, -----
3469	Bowker's Wheat and Corn Fertilizer, -----	William H. Seigfreid, Kempton, -----
	S. B. BRODBECK, BRODBECK. PA.	
3696	Brodbeck's Reliable, -----	S. B. Brodbeck, Brodbeck, -----
	THE CENTRAL CHEMICAL COMPANY, THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.	
3748	C. C. C. Golden Sheaf, -----	Charles Chamberlin, Sallnsville, -----
4437	C. C. C. Golden Sheaf, -----	Miller & Son, Waynesboro, -----
3440	C. C. C. Golden Sheaf, -----	C. R. Nichols, Sbingle House, -----
4744	C. C. C. Phoenix, -----	Athens Milling Co., Athens, -----
4099	C. C. C. Phoenix, -----	E. B. Bowersox, Benfer, -----
4433	C. C. C. Phoenix, -----	L. H. Leiter & Brother, Greencastle, -----
	THE CHESAPEAKE CHEMICAL CO., BALTIMORE, MD.	
4369	C. C. National Crop Grower, -----	James Herman, Nescopeck, -----
	CHICAGO FEED OND FERTILIZER CO., OSBORN, IND.	
4440	Magic Fertilizer, -----	Holmes Seed Co., Harrisburg, -----
	GILES F. CLARK, SCRANTON, PA.	
4221	General Garden Fertilizer, -----	Giles F. Clark, Scranton, -----
	THE COE-MORTIMER COMPANY, SUB- SIDIARY OF THE AMERICAN AGRI- CULTURAL CHEMICAL CO., NEW YORK, N. Y.	
3884	E. Frank Coe's Columbian Corn and Potato Fertilizer, 1916, -----	A. F. Renner, Nazareth, -----
3682	E. Frank Coe's Columbian Corn and Potato Fertilizer, 1916, -----	The I. W. Scott Co., Pittsburgh, -----
3796	E. Frank Coe's Columbian Corn and Potato Fertilizer, 1916, -----	A. D. Smelser, Pleasant Gap, -----
	COLUMBIA GUANO COMPANY, BALTI- MORE, MD.	
4619	Columbian Wheat, Corn and Grass Special Fertilizer, -----	J. H. Woy, Coleman, -----

## FERTILIZERS—Continued.

FERTILIZERS—Continued.												
Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
6.20	1.78	1.65	12.08	11.00	10.92	10.00	1.16	1.00	1.10	1.00	41 00	4117
6.08	0.89	0.82	9.43	9.00	8.98	8.00	0.45	1.00	†1.05	1.00	31 50	4792
5.32	0.82	0.82	10.89	9.00	9.61	8.00	1.28	1.00	†0.86	1.00	37 50	4544
6.98	0.98	0.82	10.84	9.00	9.22	8.00	1.62	1.00	†0.84	1.00	35 00	3481
6.03	0.95	0.82	13.16	11.00	12.24	10.00	0.92	1.00	†1.15	1.00	38 50	4565
9.07	0.73	0.82	11.03	11.00	10.05	10.00	0.98	1.00	†1.07	1.00	32 00	4289
9.68	1.04	0.82	12.60	11.00	10.99	10.00	1.61	1.00	†1.00	1.00	38 00	4751
5.58	1.53	0.82	9.35	9.00	8.05	8.00	1.30	1.00	†2.02	2.00	36 50	3469
8.44	0.56	0.41	12.08	9.00	7.99	8.00	4.09	1.00	*0.70	1.00	-----	3696
6.53	0.86	0.82	8.97	-----	8.20	8.00	0.77	-----	†1.15	1.00	33 00	3748
7.26	0.74	0.82	9.50	-----	8.63	8.00	0.87	-----	1.01	1.00	32 00	4437
6.95	0.89	0.82	8.97	-----	8.32	8.00	0.65	-----	†1.13	1.00	33 00	3440
5.90	0.51	0.41	10.24	-----	9.69	8.00	0.55	-----	0.50	0.50	29 00	4744
4.75	0.51	0.41	9.38	-----	8.64	8.00	0.74	-----	0.60	0.50	24 47	4099
3.84	0.52	0.41	8.37	-----	7.97	8.00	0.40	-----	0.81	0.50	26 00	4433
7.98	1.97	1.64	10.91	9.00	10.45	8.00	0.46	1.00	*†1.69	2.00	43 00	4369
†9.10	†3.22	-----	†7.40	-----	†2.62	-----	†4.78	-----	†0.52	-----	†70 00	4440
†10.90	†1.50	-----	†5.23	-----	†3.65	-----	†1.58	-----	††0.76	-----	†40 00	4221
8.85	1.25	1.23	11.65	11.00	9.90	10.00	1.75	1.00	†1.12	1.00	36 50	3884
8.45	1.49	1.23	10.38	11.00	*9.53	10.00	0.85	1.00	†1.19	1.00	43 00	3682
7.85	1.37	1.23	10.69	11.00	*9.62	10.00	1.07	1.00	†1.21	1.00	32 00	3796
3.38	0.93	0.82	8.79	8.50	*7.36	8.00	1.43	0.50	†1.01	1.00	31 50	4619

\*Deficient.

†No. 4792 As muriate, 0.84%; as sulphate, 0.21%.

†No. 4544 As sulphate, 0.86%.

†No. 3481 As sulphate, 0.84%.

†No. 4565 As sulphate, 1.15%.

†No. 4289 As muriate, 0.53%; as sulphate, 0.54%.

†No. 4751 As muriate, 0.53%; as sulphate, 0.47%.

†No. 3469 As muriate, 1.35%; as sulphate, 0.67%.

†No. 3748 As sulphate, 1.15%.

†No. 3440 As muriate, 0.91%; as sulphate, 0.22%.

†No. 4369 As sulphate, 1.69%.

†No. 4221 As muriate, 0.60%; as sulphate, 0.16%.

†No. 3884 As sulphate, 1.12%.

†No. 3682 As muriate, 0.67%; as sulphate, 0.52%.

†No. 3796 As muriate, 0.71%; as sulphate, 0.50%.

†No. 4619 As sulphate, 1.01%.

‡Excluded from average.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	<b>THE CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.</b>	
4504	Consumer's Ammoniated Potash Compound, -----	H. S. Lockwood, S. Canaan, -----
4152	Consumer's Ammoniated Potash Compound, -----	Overly & Good, New Holland, -----
4092	Consumer's Ammoniated Potash Compound, -----	C. A. Snyder, Mifflinburg, -----
4517	Consumer's Pure-Sure Corn and Vegetable (with 1% Potash), -----	Murry Co., Honesdale, -----
4503	Consumer's Pure-Sure Plant Food, -----	H. S. Lockwood, S. Canaan, -----
4151	Consumer's Pure-Sure Plant Food, -----	Overly & Good, New Holland, -----
4516	Consumer's XXXX Fish and Potash Mixture, -----	Murry Co., Honesdale, -----
	<b>JOSIAH COPE &amp; COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.</b>	
4700	Wheat and Grass Special, -----	Jones Evanson, Christiania, -----
	<b>DuBOIS FERTILIZER WORKS, INC., DuBOIS, PA.</b>	
4308	DuBois Corn Special, 1918, -----	M. R. Brumbaugh & Son, Martinsburg, --
3857	DuBois Corn Special, 1918, -----	George Burnham, Eldred, -----
3563	DuBois Corn Special, 1918, -----	Hibner Hoover Hardware Co., DuBois, -----
3859	DuBois Grain Grower, 1918, -----	George Burnham, Eldred, -----
4193	DuBois Grain Grower, 1918, -----	Farmers Supply Co., New Castle, -----
3489	DuBois Grain Grower, 1918, -----	W. H. Kauffman, Harmony, -----
3854	DuBois Potato and Truck, 1918, -----	George Burnham, Eldred, -----
3791	DuBois Potato and Truck, 1918, -----	J. S. Cole, Millville, -----
3566	DuBois Potato and Truck, 1918, -----	Fetzer Brothers, Brookville, -----
	<b>AMOS EBY &amp; COMPANY, LEAMAN PLACE, PA.</b>	
4260	Farmers Mixture, -----	Clayton Rauck, Leaman Place, -----
4262	Pequea High Grade, -----	Clayton Rauck, Leaman Place, -----
4261	Pequea Special Potato, -----	Clayton Rauck, Leaman Place, -----
4259	Pequea Valley Fertilizer, -----	Clayton Rauck, Leaman Place, -----
	<b>EUREKA CHEMICAL COMPANY, BALTIMORE, MD.</b>	
3586	Eureka Corn and Potato, -----	D. J. Beitzel, Mechanicsburg, -----
3164	Eureka Corn and Potato, -----	N. E. Gobrecht & Brother, Hanover, ---
3378	Eureka Corn and Potato, -----	Frank Rees, Phoenixville, -----
3694	Eureka Fish and Potash, -----	J. G. Leese, Hokes, -----
4045	Eureka Fish and Potash, -----	W. H. Nesbitt, McConnellsburg, -----
3379	Eureka Fish and Potash, -----	Frank Rees, Phoenixville, -----



## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
5.40	0.76	0.41	9.90	9.00	9.16	8.00	0.74	1.00	†1.01	1.00	35 00	4504
3.56	0.74	0.41	9.25	9.00	8.01	8.00	1.24	1.00	†1.20	1.00	32 50	4152
6.45	0.76	0.41	9.68	9.00	8.91	8.00	0.77	1.00	1.22	1.00	26 44	4092
4.33	2.83	2.47	8.30	9.00	*7.47	8.00	0.83	1.00	†1.31	1.00	50 00	4517
6.12	0.96	0.82	10.31	9.00	9.75	8.00	0.56	1.00	†1.10	1.00	37 00	4503
5.06	1.98	0.82	10.82	9.00	9.57	8.00	1.25	1.00	†1.14	1.00	34 75	4151
5.36	1.90	1.65	9.45	9.00	8.54	8.00	0.91	1.00	†1.44	1.00	45 00	4516
7.13	0.94	0.82	9.63	9.00	8.86	8.00	0.77	1.00	*†0.78	1.00	31 00	4700
6.75	0.64	0.82	10.69	9.00	9.67	8.00	1.02	1.00	†1.50	1.50	36 00	4308
6.35	0.67	0.82	10.61	9.00	8.95	8.00	1.66	1.00	†1.63	1.50	35 25	3857
6.43	0.88	0.82	8.98	9.00	8.09	8.00	0.89	1.00	*†0.89	1.50	38 00	3563
6.42	0.78	0.82	9.50	8.00	7.94	7.00	1.56	1.00	†1.07	1.00	31 25	3859
2.65	0.86	0.82	8.93	8.00	7.64	7.00	1.29	1.00	†1.16	1.00	36 50	4193
3.89	0.98	0.82	8.53	8.00	6.96	7.00	1.57	1.00	0.84	1.00	32 00	3489
6.61	*1.43	1.64	9.43	9.00	8.21	8.00	1.22	1.00	†2.08	2.00	45 00	3854
5.53	*1.17	1.64	10.06	9.00	8.84	8.00	1.22	1.00	*†1.38	2.00	45 00	3791
8.21	*1.16	1.64	9.12	9.00	8.34	8.00	0.78	1.00	†2.01	2.00	45 00	3566
3.82	0.45	0.41	8.41	7.00	7.49	6.00	0.92	1.00	0.71	0.50	23 00	4260
8.05	*2.60	2.89	10.00	8.00	8.05	6.00	1.95	2.00	†1.34	1.00	45 00	4262
7.57	1.08	1.23	10.19	7.00	8.46	6.00	1.73	1.00	†3.42	3.00	45 00	4261
8.32	1.54	1.64	12.36	12.00	10.45	10.00	1.91	2.00	1.13	1.00	39 00	4259
5.65	0.86	0.82	8.33	8.50	*7.45	8.00	0.88	0.50	0.78	0.75	31 75	3586
7.50	0.88	0.82	8.97	8.50	7.86	8.00	1.11	0.50	0.84	0.75	30 50	3164
7.77	0.85	0.82	8.99	8.50	7.88	8.00	1.11	0.50	†0.89	0.75	32 00	3378
5.08	0.50	0.41	9.94	8.50	8.69	8.00	1.25	0.50	0.27	0.25	25 00	3694
2.93	0.72	0.41	9.61	8.50	8.33	8.00	1.28	0.50	0.31	0.25	23 45	4045
5.89	0.93	0.41	8.27	8.50	*7.42	8.00	0.85	0.50	0.22	0.25	25 00	3379

\*Deficient.

†No. 4504 As muriate, 0.56%; as sulphate, 0.45%.

†No. 4152 As sulphate, 1.20%.

†No. 4517 As sulphate, 1.31%.

†No. 4503 As sulphate, 1.10%.

†No. 4151 As muriate, 0.62%; as sulphate, 0.52%.

†No. 4516 As sulphate, 1.44%.

†No. 4700 As muriate, 0.60%; as sulphate, 0.18%.

†No. 4308 As sulphate, 1.50%.

†No. 3857 As sulphate, 1.63%.

†No. 3563 As muriate, 0.25%; as sulphate, 0.64%.

†No. 3859 As sulphate, 1.07%.

†No. 4193 As sulphate, 1.16%.

†No. 3854 As muriate, 0.95%; as sulphate, 1.13%.

†No. 3791 As muriate, 0.59%; as sulphate, 0.79%.

†No. 3566 As muriate, 0.66%; as sulphate, 1.45%.

†No. 4262 As muriate, 0.62%; as sulphate, 0.72%.

†No. 4261 As muriate, 0.93%; as sulphate, 2.49%.

†No. 3378 As sulphate, 0.89%.

TABLE I.—COMPLE

Chemist's number.	Name of Manufacturer and Brand.		Sample Taken From—	
3837	FARMERS FERTILIZER WORKS, ELIZA-BETHTOWN, PA.		Horace H. Martin, Manheim, -----	
3509	Pride of Donegal, ----- Special Compound, -----		Addison Landis, Middletown, -----	
4230	THE FERTILE CHEMICAL COMPANY, CLEVELAND, OHIO. Nitro Fertile, -----		Derry Hardware Co., Derry, -----	
4144	GRIFFITH & BOYD COMPANY, BALTI-MORE, MD.		Ezra Groff, Bareville, -----	
3256	Blood, Bone and Potash, -----		A. L. Hartman, Schaefferstown, -----	
3772	Economizer, -----		Joseph Klein, Danville, -----	
3641	Economizer, -----		E. H. Sterner, Codorus, -----	
4578	Farmers Potato and Tomato, -----		F. S. Sadler, Point Marion, -----	
3307	Farmers Potato and Tomato, -----		E. L. White, Danville, -----	
3607	Farmers Potato and Tomato, -----		George A. Wolf & Sons, Mt. Wolf, -----	
4147	Fish Bone and Potash with 2% Potash, -----		Ezra Groff, Bareville, -----	
4520	S. M. HESS & BROTHER, INC., SUB-SIDIARY OF THE AMERICAN AGRI-CULTURAL CHEMICAL COMPANY, PHILADELPHIA, PA.		A. C. Schroeh, Elk Lick, -----	
4521	Big Crop Fertilizer, 1916, -----		A. C. Schroeh, Elk Lick, -----	
4378	Farmers General Fertilizer, 1916, -----		C. L. Tressler, Conyngham, -----	
4091	Fish and Potato Manure, 1916, -----		J. R. Iddings, Millinburg, -----	
4085	Keystone Phosphate, -----		John Chisholm, Mereer, -----	
3728	Keystone Phosphate, -----		Ira Price, Everett, -----	
3900	Keystone Phosphate, -----		George H. Schaden, Catasauqua, -----	
3819	Potato Manure, 1916, -----		Buffalo Valley Producers & Consum Corporation, Lewisburg, -----	
4665	Reliable Potash Mixture, 1916, -----		D. Irvin Baisor, Millintown, -----	
3476	Special Corn Manure, 1916, -----		George H. Baker, Valencia, -----	
4761	Special Corn Manure, 1916, -----		H. B. Fawcett, Campbellsville, -----	
4010	Special Corn Manure, 1916, -----		Jonas Hildebeitel, Green Lane, -----	
4085	Special High Grade Fertilizer, 1916, -----		Buffalo Valley Producers & Consum Corporation, Lewisburg, -----	
4666	Wheat and Grass Manure, 1916, -----		D. Irvin Baisor, Millintown, -----	
4527	Wheat and Grass Manure, 1916, -----		T. G. Hagar, Farmington, -----	

## FERTILIZERS—Continued.

Fertilizers—Continued.													
NITROGEN			PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.	
Found.	Guaranteed.		Total.		Available.		Insoluble.		Found.	Guaranteed.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.					
	%	%	%	%	%	%	%	%	%	%	\$		
7	*2.21	2.47	9.53	8.00	6.81	7.00	2.72	1.00	*†0.74	1.00	46 00	3837	
5	1.35	1.23	10.20	9.00	8.25	8.00	1.95	1.00	*†0.69	1.00	33 50	3569	
5	†2.10	2.00	†3.35	3.00	†3.35	3.00	-----	-----	††3.14	3.00	†70c pt.	4230	
5	*2.81	4.10	11.26	9.00	9.69	8.00	1.57	1.00	†1.65	1.00	55 00	4144	
6	0.75	0.41	9.06	7.00	7.59	6.00	1.47	1.00	†0.54	0.50	26 00	3256	
1	0.83	0.41	11.07	7.00	7.43	6.00	3.64	1.00	†0.60	0.50	22 00	3772	
5	0.71	0.41	10.19	7.00	7.56	6.00	2.63	1.00	†0.60	0.50	23 05	3641	
2	1.30	1.25	10.24	9.00	8.26	8.00	1.98	1.00	†1.21	1.00	42 50	4578	
7	1.53	1.25	11.60	9.00	8.49	8.00	3.11	1.00	†1.27	1.00	35 00	3307	
†1	2.01	1.25	7.91	9.00	*7.17	8.00	0.74	1.00	†1.00	1.00	36 00	3607	
0	1.52	1.50	9.06	8.00	7.08	7.00	1.98	1.00	*†1.48	2.00	41 00	4147	
37	2.00	1.65	11.93	11.00	10.88	10.00	1.05	1.00	†0.87	1.00	41 00	4520	
35	0.86	0.82	10.84	11.00	10.43	10.00	0.41	1.00	†1.33	1.00	34 50	4521	
79	0.93	0.82	10.70	11.00	*9.65	10.00	0.55	1.00	†1.26	1.00	31 00	4378	
26	1.85	1.65	11.54	10.00	10.62	9.00	0.92	1.00	*0.48	1.00	-----	4091	
33	0.90	0.82	10.46	9.00	8.74	8.00	1.72	1.00	†0.90	1.00	33 75	4685	
51	1.05	0.82	9.87	9.00	8.90	8.00	0.97	1.00	*†0.80	1.00	34 00	3728	
70	0.93	0.82	9.13	9.00	7.92	8.00	1.21	1.00	†1.10	1.00	33 50	3900	
35	2.38	2.47	10.52	10.00	9.47	9.00	1.05	1.00	†1.01	1.00	44 75	3819	
35	1.51	1.23	11.93	11.00	10.76	10.00	1.17	1.00	†1.04	1.00	-----	4665	
24	1.31	0.82	11.25	10.00	9.32	9.00	1.93	1.00	†1.02	1.00	35 75	3476	
67	1.01	0.82	11.39	10.00	9.72	9.00	1.67	1.00	†0.85	1.00	33 00	4761	
12	0.97	0.82	10.18	10.00	9.11	9.00	1.07	1.00	†1.07	1.00	36 00	4010	
45	*7.04	8.23	6.89	6.00	6.38	5.00	0.51	1.00	†1.65	1.00	-----	4085	
06	1.01	0.82	10.80	10.00	9.69	9.00	1.11	1.00	†1.05	1.00	32 15	4666	
72	0.89	0.82	10.87	10.00	10.63	9.00	0.24	1.00	†0.96	1.00	-----	4527	

Deficient.

No. 3837 As muriate, 0.55%; as sulphate, 0.19%.

No. 3569 As sulphate, 0.69%.

No. 4230 As sulphate, 3.14%.

No. 4144 As muriate, 0.50%; as sulphate, 1.15%.

No. 3256 As muriate, 0.20%; as sulphate, 0.34%.

No. 3772 As sulphate, 0.60%.

No. 3641 As sulphate, 0.60%.

No. 4578 As sulphate, 1.21%.

No. 3307 As sulphate, 1.27%.

No. 3607 As sulphate, 1.00%.

No. 4147 As sulphate, 1.48%.

No. 4520 As muriate, 0.62%; as sulphate, 0.25%.

No. 4521 As sulphate, 1.33%.

No. 4378 As muriate, 0.79%; as sulphate, 0.47%.

No. 4685 As sulphate, 0.90%.

No. 3728 As sulphate, 0.80%.

No. 3900 As sulphate, 1.10%.

No. 3819 As sulphate, 1.01%.

No. 4665 As muriate, 0.81%; as sulphate, 0.23%.

No. 3476 As sulphate, 1.02%.

No. 4761 As sulphate, 0.85%.

No. 4010 As sulphate, 1.07%.

No. 4085 As muriate, 1.22%; as sulphate, 0.43%.

No. 4666 As muriate, 0.74%; as sulphate, 0.31%.

No. 4527 As sulphate, 0.96%.

†Excluded from average.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	<b>THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.</b>	
3454	Hubbard's English Compound, -----	J. R. Meck, Meckville, -----
3419	Hubbard's English Compound, -----	Frank Wait, Tyrone, -----
	<b>INTERNATIONAL AGRICULTURAL COR- PORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.</b>	
3426	Buffalo General Favorite, -----	Eulalia Mills, Coudersport, -----
4168	Buffalo General Favorite, -----	G. C. Reuscher, Blossburg, -----
3218	I. A. C. Victory, -----	J. H. Young, Strattonville, -----
	<b>THE JARECKI CHEMICAL COMPANY, SANDUSKY, OHIO.</b>	
3221	Lake Erie Guano with Phosphate and Potash, -----	J. F. McClain, Miola, -----
4600	Lake Erie Guano with Phosphate and Potash, -----	S. S. Mosholder, Rockwood, -----
3224	Little Giant, -----	J. F. McClain, Miola, -----
3225	Middle West Formula, -----	J. F. McClain, Miola, -----
4599	Middle West Formula, -----	S. S. Mosholder, Rockwood, -----
4566	Number One Formula, -----	W. Z. Johnson, Amity, -----
3223	Number One Formula, -----	J. F. McClain, Miola, -----
	<b>KEYSTONE BONE FERTILIZER COM- PANY, PHILADELPHIA, PA.</b>	
4863	Keystone Royal Corn and Potato Manure, -----	Charles H. Ebner, Easton, -----
3210	Keystone Royal Corn and Potato Manure, -----	Charles Schoffstall, Valley View, -----
	<b>KOLLER FERTILIZER COMPANY, SEITZ- LAND, PA.</b>	
3706	Koller's Potato Grower Phosphate, -----	Summit Lumber Co., New Freedom, -----
	<b>THE LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.</b>	
4155	Potato, Fruit and Vegetable, -----	George W. Bare, New Holland, -----
3392	Potato, Fruit and Vegetable, -----	William Dean, Parkesburg, -----
3276	Potato, Fruit and Vegetable, -----	Ellsworth Erdman, Klingerstown, -----
3277	Potato, Tobacco and Truck Manure, -----	Ellsworth Erdman, Klingerstown, -----
3211	Special Guano, -----	Josiah Flinchbaugh, Windsor, -----
3244	Special Guano, -----	W. E. Ulrich, Myerstown, -----
	<b>THE LANCASTER CHEMICAL COM- PANY, LANCASTER, PA.</b>	
3664	No. 2 Dewey Brand, -----	Harry Brackbill, Strasburg, -----
3665	No. 19 Special Potato, -----	Harry Brackbill, Strasburg, -----



## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
6.73	0.90	0.82	9.71	9.00	*7.58	8.00	2.13	1.00	†0.86	1.00	-----	3454
6.02	0.96	0.82	9.89	9.00	8.19	8.00	1.70	1.00	†1.12	1.00	32 00	3419
6.48	0.88	0.80	8.30	9.00	*6.90	8.00	1.40	1.00	0.87	1.00	31 75	3426
5.75	0.73	0.80	9.41	9.00	8.63	8.00	0.78	1.00	1.17	1.00	36 00	4168
7.25	0.94	0.80	9.92	9.00	9.19	8.00	0.73	1.00	*0.62	1.00	35 00	3218
11.22	1.72	1.25	11.49	10.00	9.96	9.00	1.53	1.00	†1.28	1.00	37 75	3221
8.28	1.14	1.25	11.19	10.00	*8.70	9.00	2.49	1.00	†1.00	1.00	35 75	4600
11.09	0.87	0.41	13.36	11.00	10.44	10.00	2.92	1.00	*†0.67	1.00	32 00	3224
12.96	1.25	0.82	17.17	13.00	14.54	12.00	2.63	1.00	†0.81	1.00	37 75	3225
10.92	1.05	0.82	17.34	13.00	15.49	12.00	1.85	1.00	†0.90	1.00	-----	4599
8.02	0.94	0.82	10.47	10.00	9.08	9.00	1.39	1.00	0.82	1.00	-----	4566
10.80	1.24	0.82	11.44	10.00	9.81	9.00	1.63	1.00	†0.98	1.00	34 75	3223
7.90	1.64	1.65	10.20	10.00	8.81	9.00	1.39	1.00	†1.88	1.00	37 50	4863
7.97	2.05	1.65	10.18	10.00	9.50	9.00	0.68	1.00	†1.72	1.00	38 50	3270
15.33	0.77	0.82	9.41	7.50	7.31	7.00	2.10	0.50	1.71	1.50	29 75	3706
6.09	0.75	0.82	8.07	8.00	7.09	7.00	0.98	1.00	†1.07	1.00	32 00	4155
4.55	1.15	0.82	8.62	8.00	*6.52	7.00	2.10	1.00	†0.82	1.00	32 00	3392
4.58	1.37	0.82	8.61	8.00	7.02	7.00	1.59	1.00	†1.30	1.00	29 50	3276
6.51	1.66	1.60	8.95	9.00	7.83	8.00	1.12	1.00	†0.89	1.00	38 00	3277
6.48	1.35	0.82	10.41	9.00	8.50	8.00	1.91	1.00	0.74	0.50	30 00	3211
4.36	1.27	0.82	10.68	9.00	8.18	8.00	2.50	1.00	†0.57	0.50	30 00	3244
11.18	1.34	1.23	10.80	9.00	8.16	8.00	2.64	1.00	*†0.13	1.00	35 00	3664
12.10	1.56	1.65	11.00	10.00	*8.44	9.00	2.56	1.00	*0.22	1.00	42 00	3665

\*Deficient.

†No. 3454 As sulphate, 0.86%.

†No. 3419 As sulphate, 1.12%.

†No. 3221 As muriate, 0.87%; as sulphate, 0.41%.

†No. 4600 As sulphate, 1.00%.

†No. 3224 As sulphate, 0.67%.

†No. 3225 As muriate, 0.59%; as sulphate, 0.22%.

†No. 4599 As sulphate, 0.90%.

†No. 3223 As muriate, 0.78%; as sulphate, 0.20%.

†No. 4863 As muriate, 0.89%; as sulphate, 0.99%.

†No. 3270 As sulphate, 1.72%.

†No. 4155 As muriate, 0.70%; as sulphate, 0.37%.

†No. 3392 As sulphate, 0.82%.

†No. 3276 As sulphate, 1.30%.

†No. 3277 As muriate, 0.76%; as sulphate, 0.13%.

†No. 3244 As sulphate, 0.57%.

†No. 3664 As sulphate, 0.13%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
3271	Levan's Full Strength Top Dresser for Grass,	Hegins Grange, Hegins, -----
3523	Levan's Full Strength Top Dresser for Grass,	Harry Keefer, Pine Grove, -----
3443	Levan's General Crop Grower Fertilizer,	C. M. Brandt, Palmyra, -----
3546	Levan's General Crop Grower Fertilizer,	Eugene Greenzweig, Kunkletown, -----
3521	Levan's General Crop Grower Fertilizer,	Hegins Grange, Hegins, -----
3444	Levan's Potato and Tobacco Fertilizer,	C. M. Brandt, Palmyra, -----
3292	Levan's Potato and Tobacco Fertilizer,	Gheen, Spigelmyer & Phleger, Antes Fort, -----
3524	Levan's Potato and Tobacco Fertilizer,	Harry Keefer, Pine Grove, -----
3522	Levan's Royal Potash Compound Fertilizer,	Hegins Grange, Hegins, -----
4336	Levan's Royal Potash Compound Fertilizer,	E. D. Houser, Palmyra, -----
3290	Levan's Special Corn and Wheat Fertilizer,	Gheen, Spigelmyer & Phleger, Antes Fort, -----
3525	Levan's Special Corn and Wheat Fertilizer,	Harry Keefer, Pine Grove, -----
3234	Levan's Special Corn and Wheat Fertilizer,	M. D. Landis, Palmyra, -----
	LISTERS AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
3478	Listers 1-8-2 Fertilizer, -----	Morrow & Buxton, Valencia, -----
4357	Listers Corn and Potato Fertilizer, 1916, -----	Wm. Fehr, Pine Grove, -----
4002	Listers Corn and Potato Fertilizer, 1916, -----	Wm. H. Fritz, Berwyn, -----
4116	Listers Corn and Potato Fertilizer, 1916, -----	F. E. Gant, Jeannette, -----
3496	Listers Harvest Queen Phosphate, 1916, -----	R. M. Bowser & Son, Renfrew, -----
4330	Listers Perfect Potato Manure, 1916, -----	Ben Everhart, Franklinville, -----
4001	Listers Perfect Potato Manure, 1916, -----	Wm. H. Fritz, Berwyn, -----
4682	Listers Perfect Potato Manure, 1916, -----	R. K. Yoder, Belleville, -----
3515	Listers Potato and Corn Fertilizer, No. 2, 1916, -----	H. B. Hoffman, Woodbury, -----
3558	Listers Potato and Corn Fertilizer, No. 2, 1916, -----	J. T. Murphy, Clearfield, -----
4683	Listers Potato and Corn Fertilizer, No. 2, 1916, -----	R. K. Yoder, Belleville, -----
4306	Listers Potato Manure, 1916, -----	M. R. Brumbaugh & Son, Martinsburg, -----
3959	Listers Potato Manure, 1916, -----	W. E. Ervin, Somerton, -----
4510	Listers Potato Manure, 1916, -----	W. S. Vansiekler, Gravity, -----
3734	Listers Special Crop Producer, 1916, -----	Jacob Bowser, St. Clairsville, -----
4205	Listers Special Crop Producer, 1916, -----	B. E. & J. T. Cokely, Scranton, -----

## FERTILIZERS—Continued.

FERTILIZERS													Continued.
Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.	
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.					
%	%	%	%	%	%	%	%	%	%	%	\$		
7.88	4.10	4.11	9.96	10.00	9.04	9.00	0.92	1.00	†2.52	2.00	59 00	3271	
7.21	*3.89	4.11	9.16	10.00	*8.06	9.00	1.10	1.00	†2.17	2.00	68 00	3523	
4.50	0.98	0.82	8.11	8.00	6.83	7.00	1.28	1.00	†1.50	1.00	30 00	3443	
4.71	0.90	0.82	7.53	8.00	*6.42	7.00	1.11	1.00	†1.64	1.00	24 00	3546	
4.12	0.90	0.82	8.39	8.00	7.19	7.00	1.20	1.00	1.52	1.00	28 00	3521	
7.11	1.51	1.23	10.77	10.00	9.76	9.00	1.01	1.00	†2.83	3.00	44 00	3444	
7.90	1.30	1.23	10.20	10.00	9.03	9.00	1.17	1.00	†2.89	3.00	42 00	3292	
6.74	1.26	1.23	10.31	10.00	9.23	9.00	1.08	1.00	†2.85	3.00	48 00	3524	
5.74	1.81	1.65	9.20	9.00	8.27	8.00	0.93	1.00	†2.25	2.00	40 00	3522	
4.81	1.79	1.65	9.59	9.00	8.38	8.00	1.21	1.00	†2.44	2.00	-----	4336	
5.03	1.15	0.82	8.34	9.00	*7.36	8.00	0.98	1.00	†2.22	2.00	33 00	3290	
4.46	0.94	0.82	8.29	9.00	*7.23	8.00	1.06	1.00	†2.02	2.00	40 00	3525	
7.77	1.14	0.82	9.76	9.00	8.71	8.00	1.05	1.00	†2.22	2.00	-----	3234	
8.10	1.36	0.82	9.18	9.00	8.16	8.00	1.02	1.00	†1.95	2.00	41 00	3478	
7.64	2.08	2.06	9.66	9.00	8.28	8.00	1.38	1.00	†1.18	1.00	35 00	4357	
6.35	1.88	2.06	9.82	9.00	8.60	8.00	1.22	1.00	†1.05	1.00	46 00	4002	
6.79	2.05	2.06	9.54	9.00	8.18	8.00	1.36	1.00	†1.12	1.00	65 00	4116	
6.75	1.32	1.23	11.71	11.00	10.46	10.00	1.25	1.00	0.97	1.00	44 00	3496	
6.53	3.21	3.29	10.70	10.00	9.97	9.00	0.73	1.00	†1.12	1.00	50 00	4330	
7.35	3.44	3.29	10.32	10.00	9.68	9.00	0.64	1.00	†1.26	1.00	58 50	4001	
6.93	3.25	3.29	10.36	10.00	9.26	9.00	1.10	1.00	*†0.74	1.00	50 75	4682	
8.78	2.47	2.06	11.17	11.00	9.83	10.00	1.34	1.00	†1.20	1.00	43 50	3515	
4.85	2.18	2.06	12.17	11.00	10.08	10.00	2.09	1.00	†1.18	1.00	48 00	3558	
7.41	2.69	2.06	11.11	11.00	9.92	10.00	1.19	1.00	†1.62	1.00	42 50	4683	
11.57	*3.46	4.11	9.57	9.00	8.97	8.00	0.60	1.00	†1.00	1.00	60 00	4306	
10.65	4.11	4.11	10.08	9.00	8.61	8.00	1.47	1.00	†1.07	1.00	61 00	3959	
10.45	*3.83	4.11	10.31	9.00	8.69	8.00	1.62	1.00	†1.67	1.00	56 00	4510	
9.97	1.05	0.82	9.41	9.00	8.81	8.00	0.60	1.00	†1.05	1.00	30 00	3734	
10.05	0.89	0.82	9.57	9.00	8.58	8.00	0.99	1.00	†1.07	1.00	45 00	4205	

\*Deficient.

†No. 3271 As muriate, 0.60%; as sulphate, 1.92%.

†No. 3523 As muriate, 0.51%; as sulphate, 1.66%.

†No. 3443 As muriate, 0.42%; as sulphate, 1.08%.

†No. 3546 As muriate, 0.34%; as sulphate, 1.30%.

†No. 3444 As sulphate, 2.83%.

†No. 3292 As sulphate, 2.89%.

†No. 3524 As sulphate, 2.85%.

†No. 3522 As sulphate, 2.25%.

†No. 4336 As sulphate, 2.44%.

†No. 3290 As sulphate, 2.22%.

†No. 3525 As sulphate, 2.02%.

†No. 3234 As muriate, 0.71%; as sulphate, 1.51%.

†No. 3478 As muriate, 1.18%; as sulphate, 0.77%.

†No. 4357 As muriate, 0.84%; as sulphate, 0.34%.

†No. 4002 As muriate, 0.66%; as sulphate, 0.39%.

†No. 4116 As muriate, 0.69%; as sulphate, 0.43%.

†No. 4330 As muriate, 0.90%; as sulphate, 0.22%.

†No. 4001 As muriate, 0.85%; as sulphate, 0.41%.

†No. 4682 As muriate, 0.57%; as sulphate, 0.17%.

†No. 3515 As sulphate, 1.20%.

†No. 3558 As muriate, 0.85%; as sulphate, 0.33%.

†No. 4683 As muriate, 0.86%; as sulphate, 0.76%.

†No. 4306 As sulphate, 1.00%.

†No. 3959 As sulphate, 1.07%.

†No. 4510 As muriate, 1.12%; as sulphate, 0.55%.

†No. 3734 As sulphate, 1.05%.

†No. 4205 As muriate, 0.82%; as sulphate, 0.25%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4060	Listers Special Crop Producer, 1916, ----	Wm. H. Fritz, Berwyn, -----
3961	Listers Standard Pure Super-phosphate of Lime, 1916, -----	W. E. Ervin, Somerton, -----
3684	Listers Success Fertilizer, 1916, -----	R. J. Toepfer, Tarentum, -----
4003	Listers U. S. Superphosphate, 1916, ----	Wm. H. Fritz, Berwyn, -----
3781	Listers U. S. Superphosphate, 1916, ----	B. Savidge, Turbotville, -----
3618	Listers Valley Brand Fertilizer, 1916, ----	W. H. Schriver, Dillsburg, -----
	FREDERICK LUDLAM COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
4628	Ludlam's Ceerops Fertilizer, C. & G. Brand, 1916, -----	Claude Davis, Windber, -----
3598	Ludlam's Ceerops Fertilizer, C. & G. Brand, 1916, -----	Seehrist & Ihrig, York, -----
4582	Ludlam's Ceerops Fertilizers, No. 2, for Grain and Grass, -----	N. B. Shober, Garret, -----
	THE MAPES FORMULA & PERUVIAN GUANO COMPANY, NEW YORK, N. Y.	
4356	Mapes' Corn Manure (1916 Brand), -----	P. H. Updegrave, Valley View, -----
3339	Mapes' Potato Manure (1916 Brand), -----	Jos. R. Taggart, Norristown, -----
4355	Mapes' Potato Manure (1916 Brand), -----	P. H. Updegrave, Valley View, -----
4253	Mapes' Tobacco Starter Improved, -----	G. Moyer, Mt. Joy, -----
	THE MARTIN FERTILIZER COMPANY, PHILADELPHIA, PA.	
3377	Martin's Sure Grower, -----	John W. Root, Kimberton, -----
4112	Martin's Sure Grower, -----	H. R. Seibert, Gibsonia, -----
	THE MILLER FERTILIZER COMPANY, BALTIMORE, MD.	
4277	Ammoniated, -----	Miller T. Harkings, Hickory Hill, -----
3698	Ammoniated, -----	L. T. Hildebrand, Loganville, -----
3301	Club Brand, -----	H. L. Ort, Pennsvale, -----
4650	Club Brand, -----	John Phelps, Sugar Grove, -----
3642	Club Brand, -----	E. H. Sterner, Codorus, -----
3670	Harvest Queen, -----	W. H. Muth & Co., Lititz, -----
4053	Harvest Queen, -----	A. S. Welch, Mt. Union, -----
3697	Hustler Phosphate, -----	L. F. Hildebrand, Loganville, -----
3790	Hustler Phosphate, -----	Grant Johnson, Millville, -----
4027	Hustler Phosphate, -----	F. H. Shinberger, Red Lion, -----
4718	No. 1, Hustler Phosphate, -----	M. B. Hacker, Lincoln, -----
4251	No. 1 Hustler Phosphate, -----	Muth Brothers, Elizabethtown, -----
3813	Potato and Vegetable Grower, -----	F. T. Baker, Lewisburg, -----
3286	Potato and Vegetable Grower, -----	Herman Keebler, Montoursville, -----
3643	Potato and Vegetable Grower, -----	E. H. Sterner, Codorus, -----
4425	Quarter Mixture, -----	John P. Wadel, Shippensburg, -----



## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
7.16	1.23	0.82	9.34	9.00	8.77	8.00	0.57	1.00	†1.16	1.00	34 50	4000
11.34	2.53	2.47	10.88	10.00	9.32	9.00	1.56	1.00	†1.00	1.00	51 00	3961
8.10	1.45	1.23	11.39	11.00	10.19	10.00	1.20	1.00	†1.27	1.00	42 00	3684
6.55	1.81	1.23	11.58	11.00	10.50	10.00	1.08	1.00	†1.27	1.00	40 00	4003
8.93	1.53	1.23	11.07	11.00	9.87	10.00	1.20	1.00	†1.49	1.00	35 50	3781
9.19	1.32	0.82	11.88	11.00	10.15	10.00	1.73	1.00	†1.18	1.00	38 00	3618
6.28	0.52	0.41	9.87	9.00	8.59	8.00	1.28	1.00	†1.16	1.00	32 00	4628
7.41	0.66	0.41	9.99	9.00	9.05	8.00	0.94	1.00	†1.03	1.00	28 00	3598
5.38	0.95	0.82	9.49	8.00	8.60	7.00	0.89	1.00	†1.67	1.00	31 50	4582
8.80	2.61	2.47	12.05	10.00	*7.66	8.00	4.39	2.00	†1.07	1.00	-----	4356
10.67	3.84	3.71	10.27	8.00	8.09	8.00	2.18	-----	†1.72	1.00	59 00	3339
6.87	3.86	3.71	9.69	8.00	*6.22	8.00	3.47	-----	†1.03	1.00	-----	4355
10.50	*3.34	4.12	11.16	8.00	8.05	6.00	3.11	2.00	1.28	1.00	56 00	4253
10.58	0.97	0.82	10.50	9.00	9.33	8.00	1.17	1.00	†1.08	1.00	36 00	3377
6.13	1.02	0.82	12.68	9.00	11.01	8.00	1.67	1.00	1.02	1.00	36 00	4112
6.27	1.40	1.44	8.89	8.50	*7.45	8.00	1.44	0.50	0.58	0.50	36 00	4277
7.71	1.50	1.44	9.36	8.50	7.92	8.00	1.44	0.50	0.68	0.50	32 50	3698
8.01	0.63	0.41	9.49	8.50	8.74	8.00	0.75	0.50	0.60	0.50	27 00	3301
5.58	0.60	0.41	8.76	8.50	8.12	8.00	0.64	0.50	0.80	0.50	29 00	4650
7.43	1.00	0.41	9.04	8.50	*7.59	8.00	1.45	0.50	0.67	0.50	26 00	3642
7.19	1.31	1.03	8.98	8.50	*7.23	8.00	1.75	0.50	0.86	0.75	31 00	3670
7.31	1.29	1.03	9.40	8.50	8.00	8.00	1.40	0.50	0.78	0.75	-----	4053
7.20	1.10	0.82	8.87	8.50	*7.43	8.00	1.44	0.50	0.81	0.50	29 50	3697
7.72	1.10	0.82	8.95	8.50	7.99	8.00	0.96	0.50	0.50	0.50	28 00	3790
5.49	0.99	0.82	8.87	8.50	7.85	8.00	1.02	0.50	0.50	0.50	27 75	4027
8.21	0.94	0.82	9.62	8.50	8.45	8.00	1.17	0.50	†0.94	1.00	36 00	4718
3.86	0.80	0.82	9.44	8.50	8.48	8.00	0.96	0.50	†1.34	1.00	35 00	4257
9.38	1.93	1.65	10.64	8.50	8.36	8.00	2.28	0.50	1.03	1.00	40 25	3813
7.42	*1.23	1.65	9.71	8.50	8.00	8.00	1.71	0.50	1.21	1.00	40 00	3286
6.77	1.48	1.65	9.22	8.50	*7.52	8.00	1.70	0.50	†1.10	1.00	38 00	3643
5.29	0.41	0.21	9.31	9.50	*8.35	9.00	0.96	0.50	0.37	0.25	-----	4425

\*Deficient.

†No. 4000 As muriate, 0.62%; as sulphate, 0.54%.

†No. 3961 As muriate, 0.54%; as sulphate, 0.46%.

†No. 3684 As muriate, 0.72%; as sulphate, 0.55%.

†No. 4003 As muriate, 0.64%; as sulphate, 0.63%.

†No. 3781 As muriate, 0.74%; as sulphate, 0.75%.

†No. 3618 As muriate, 0.76%; as sulphate, 0.42%.

†No. 4628 As muriate, 0.69%; as sulphate, 0.47%.

†No. 3598 As muriate, 0.67%; as sulphate, 0.36%.

†No. 4582 As muriate, 0.70%; as sulphate, 0.97%.

†No. 4356 As muriate, 0.63%; as sulphate, 0.44%.

†No. 3339 As sulphate, 1.72%.

†No. 4355 As muriate, 0.58%; as sulphate, 0.45%.

†No. 3377 As muriate, 0.34%; as sulphate, 0.74%.

†No. 4718 As sulphate, 0.94%.

†No. 4257 As muriate, 0.60%; as sulphate, 0.74%.

†No. 3643 As sulphate, 1.10%.



TABLE I.—COMPLE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4720	Special Tobacco Grower, -----	M. B. Hacker, Lincoln, -----
3671	Special Tobacco Grower, -----	W. H. Muth & Co., Lititz, -----
4424	W. G. Phosphate, -----	John P. Wadel, Shippensburg, -----
	NASSAU FERTILIZER COMPANY, NEW YORK, N. Y.	
4830	General Crop Fertilizer, -----	John H. Landis, Quakertown, -----
4831	Wheat and Grass Grower, 1916, -----	John H. Landis, Quakertown, -----
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
3681	N. A. C. Brand Nitraco, -----	The I. W. Scott Co., Pittsburgh, -----
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
3814	Ober's Farmers Mixture, -----	F. T. Baker, Lewisburg, -----
3363	Ober's Farmers Mixture, -----	Munholland & Dale, Mortonville, -----
3186	Ober's Independent Ammoniated Superphosphate, -----	F. D. Blocher, Gettysburg, -----
4386	Ober's Independent Ammoniated Superphosphate, -----	J. H. Duttera, New Oxford, -----
4581	Ober's Independent Ammoniated Superphosphate, -----	N. B. Shober, Garret, -----
	POTAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
3494	Coon Brand Guano, 1916, -----	J. J. Kennedy, Zelenople, -----
3581	Coon Brand Guano, 1916, -----	Mock & Hartman, Harrisburg, -----
3202	Coon Brand Guano, 1916, -----	M. F. Waser, York, -----
3531	Grange Mixture, 1916, -----	F. P. Buchman, Weatherly, -----
4468	Grange Mixture, 1916, -----	Thomas F. Leonard, Scranton, -----
4450	Patapasco B. B. & P. Brand, 1916, -----	Charles S. Brunner, New Bloomfield, -----
4315	Patapasco B. B. & P. Brand, 1916, -----	Hutchison & Goodwin, Huntingdon, -----
4610	Patapasco B. B. & P. Brand, 1916, -----	Wilson Schrock, Somerset, -----
3533	Patapasco Columbian Guano for Truck, Potatoes and Tobacco, 1916, -----	F. P. Buchman, Weatherly, -----
3580	Patapasco Plant Food with Potash, -----	Mock & Hartman, Harrisburg, -----
3530	Patapasco Planters Delight, 1917, -----	F. P. Buchman, Weatherly, -----
3584	Patapasco Special Early Trucker, 1916, -----	Mock & Hartman, Harrisburg, -----
3304	Patapasco Special Early Trucker, 1916, -----	George M. Walter, Milton, -----
3493	Patapasco Special Potato Manure, 1916, -----	J. J. Kennedy, Zelenople, -----
4087	Patapasco Special Potato Manure, 1916, -----	G. L. Schell, Vicksburg, -----
4611	Patapasco Special Potato Manure, 1916, -----	Wilson Schrock, Somerset, -----

## FERTILIZERS—Continued.

FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
7.34	1.59	1.65	8.37	7.50	7.53	7.00	0.84	0.50	†0.97	1.00	41 00	4720
7.78	1.73	1.65	9.68	7.50	*6.67	7.00	3.01	0.50	1.10	1.00	36 00	3671
2.17	0.67	0.41	8.05	7.50	*6.77	7.00	1.28	0.50	†0.53	0.50	24 50	4424
5.27	1.39	0.82	8.87	9.00	8.13	8.00	0.74	1.00	2.06	2.00	38 50	4830
6.67	0.86	0.82	9.77	9.00	8.67	8.00	1.10	1.00	†1.29	1.00	32 50	4831
6.74	3.73	3.30	12.73	16.00	7.84	8.00	4.89	8.00	†2.14	2.00	120 00	3681
10.38	0.94	0.82	10.64	10.00	9.71	9.00	0.93	1.00	†2.34	2.00	39 75	3814
9.66	0.98	0.82	10.86	10.00	9.58	9.00	1.28	1.00	2.19	2.00	38 00	3363
8.74	1.55	0.82	10.64	9.00	9.39	8.00	1.25	1.00	1.48	1.00	32 00	3186
6.85	0.78	0.82	10.08	9.00	9.26	8.00	0.82	1.00	†1.16	1.00	30 00	4386
9.39	0.90	0.82	9.96	9.00	8.94	8.00	1.02	1.00	†1.31	1.00	31 50	4581
8.63	1.12	0.82	9.55	10.00	8.81	9.00	0.74	1.00	†1.03	1.00	35 00	3494
7.57	1.15	0.82	10.84	10.00	9.78	9.00	1.06	1.00	1.08	1.00	33 00	3581
9.70	1.25	0.82	10.42	10.00	8.93	9.00	1.49	1.00	†0.96	1.00	33 00	3202
9.25	1.72	1.65	10.45	10.00	8.97	9.00	1.48	1.00	†1.18	1.00	3531	
9.67	1.86	1.65	11.70	10.00	9.02	9.00	2.68	1.00	†1.30	1.00	65 00	4468
6.15	0.53	0.41	9.81	9.00	8.64	8.00	1.17	1.00	†1.01	1.00	29 00	4450
8.05	0.86	0.41	10.20	9.00	8.92	8.00	1.28	1.00	†1.10	1.00	28 00	4315
5.39	0.54	0.41	9.68	9.00	8.49	8.00	1.19	1.00	†1.27	1.00	34 00	4610
9.60	2.47	2.47	10.38	10.00	9.19	9.00	1.19	1.00	†1.16	1.00	3533	
7.63	1.23	0.82	10.28	9.00	8.58	8.00	1.70	1.00	†2.16	2.00	37 00	3580
8.12	1.89	1.65	10.03	9.00	8.63	8.00	1.40	1.00	†2.10	2.00	3530	
8.38	*3.88	4.11	9.52	9.00	8.61	8.00	0.91	1.00	†1.16	1.00	58 00	3584
6.54	3.98	4.11	9.12	9.00	8.28	8.00	0.84	1.00	†1.01	1.00	59 00	3304
8.81	1.66	1.65	10.54	11.00	9.88	10.00	0.66	1.00	*†0.64	1.00	42 00	3493
7.08	1.70	1.65	11.38	11.00	10.09	10.00	1.29	1.00	†1.12	1.00	42 00	4087
9.16	1.74	1.65	10.93	11.00	9.85	10.00	1.08	1.00	†1.07	1.00	45 00	4611

\*Deficient.

†No. 4720 As muriate, 0.74%; as sulphate, 0.23%.  
†No. 4424 As sulphate, 0.53%.  
†No. 4831 As muriate, 0.77%; as sulphate, 0.52%.  
†No. 3681 As muriate, 0.71%; as sulphate, 1.43%.  
†No. 3814 As muriate, 1.70%; as sulphate, 0.64%.  
†No. 4386 As muriate, 0.85%; as sulphate, 0.31%.  
†No. 4581 As muriate, 0.71%; as sulphate, 0.66%.  
†No. 3494 As muriate, 0.52%; as sulphate, 0.51%.  
†No. 3202 As muriate, 0.66%; as sulphate, 0.30%.  
†No. 3531 As muriate, 0.51%; as sulphate, 0.67%.  
†No. 4468 As sulphate, 1.30%.  
†No. 4450 As muriate, 0.62%; as sulphate, 0.39%.  
†No. 4315 As sulphate, 1.10%.  
†No. 4610 As muriate, 0.73%; as sulphate, 0.54%.  
†No. 3533 As muriate, 0.53%; as sulphate, 0.63%.  
†No. 3580 As muriate, 1.14%; as sulphate, 1.02%.  
†No. 3530 As muriate, 1.17%; as sulphate, 0.93%.  
†No. 3584 As muriate, 0.80%; as sulphate, 0.36%.  
†No. 3304 As sulphate, 1.01%.  
†No. 3494 As sulphate, 0.64%.  
†No. 4087 As muriate, 0.95%; as sulphate, 0.17%.  
†No. 4611 As muriate, 0.58%; as sulphate, 0.49%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4333 3552	<b>PIEDMONT MT. AIRY GUANO COMPANY,</b> BALTIMORE, MD. Piedmont Golden Eagle Fertilizer, ----- Piedmont Golden Eagle Fertilizer, -----	A. H. Wills, Tyrone, ----- H. L. Orr & Co., Tyrone, -----
3325 4231 4115	<b>PITTSBURGH PROVISION &amp; PACKING</b> <b>COMPANY, PITTSBURGH, PA.</b> Keystone Fertilizer, ----- Keystone Fertilizer, ----- Keystone Fertilizer, -----	W. J. Gilson, Titusville, ----- George Mowry & Brother, Derry, ----- George Renton & Co., Castle Shannon, -----
3717 4613 3203 3195 3514 4057	<b>THE POLLOCK FERTILIZER COMPANY,</b> <b>SUBSIDIARY OF THE AMERICAN</b> <b>AGRICULTURAL CHEMICAL CO.,</b> <b>BALTIMORE, MD.</b> Corn and Oats Special, 1916, ----- Corn and Oats Special, 1916, ----- Corn and Oats Special, 1916, ----- Corn, Wheat and Tomato Guano, 1916, ----- Corn, Wheat and Tomato Guano, 1916, ----- Special Potato and Tobacco Fertilizer, 1916, -----	Farnes Baker, Everett, ----- Webster Barran, Friedens, ----- Barshing & Craley, Red Lion, ----- J. W. Gable, Hellam, ----- John L. Longenecker, Woodhury, ----- R. N. McCarl & Son, Mapleton Depot, -----
4179 3848 4674 4318 4388 4729 4097 4834 3774 4675 4602 3189	<b>RASIN MONUMENTAL COMPANY, BAL-</b> <b>TIMORE, MD.</b> Rasin's Capital Crop Compound, ----- Rasin's Capital Crop Compound, ----- Rasin's Emergency Fish Bone and Potash, ----- Rasin's Half and Half Special, ----- Rasin's Half and Half Special, ----- Rasin's Royal Fish Bone and Potash, ----- Rasin's Royal Manure, ----- Rasin's Royal Manure, ----- Rasin's Royal Manure, ----- Wm. Penn Crop Grower, ----- Wm. Penn Crop Grower, ----- Wm. Penn Crop Grower, -----	C. B. Farr, North East, ----- Leonard Ritter, St. Marys, ----- Walter Book, Port Royal, ----- John Bumgardner, Petersburg, ----- E. C. Thomas, Gettysburg, ----- Joseph K. Shultz, Washington Borough, ----- John Duck, Beavertown, ----- H. H. Mohr, Quakertown, ----- H. A. Snyder, Strawberry Ridge, ----- Walter Book, Port Royal, ----- S. S. Mosholder, Rockwood, ----- E. C. Thomas, Gettysburg, -----
4251	<b>READING BONE FERTILIZER COMPANY,</b> <b>READING, PA.</b> Blood, Meat & Potash Mixture, -----	Levi Schuman, Salunga, -----
4871 4861 3536 3883 3950 3534 4872	<b>ROBERT A. REICHARD, ALLENTOWN,</b> <b>PA.</b> Farmers Choice, ----- Farmers Choice, ----- Gilt Edge Phosphate, ----- Gilt Edge Phosphate, ----- Gilt Edge Phosphate, ----- Special Manure, ----- Special Manure, -----	J. P. Kunsman, Hellertown, ----- Levine A. Lerch, Bethlehem, ----- J. B. Adams, Weatherly, ----- J. W. Bartholomew, Bath, ----- Schlegel & Adams, Fleetwood, ----- J. B. Adams, Weatherly, ----- J. P. Kunsman, Hellertown, -----

## FERTILIZERS—Continued.

FERTILIZERS—Continued.													
Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.	
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.					
%	%	%	%	%	%	%	%	%	%	%	\$		
5.41	1.72	1.65	10.29	10.00	9.13	9.00	1.16	1.00	†1.28	1.00	40 00	4333	
7.42	1.67	1.65	9.99	10.00	*8.74	9.00	1.25	1.00	†1.58	1.00	40 00	3552	
5.47	1.90	1.43	10.97	11.00	*7.47	9.00	3.50	2.00	1.04	1.00	36 00	3325	
5.59	1.58	1.43	11.61	11.00	*8.56	9.00	3.05	2.00	†1.43	1.00	57 00	4231	
4.88	1.95	1.43	10.94	11.00	*7.79	9.00	3.15	2.00	†1.32	1.00	38 00	4115	
7.50	0.72	0.41	9.41	9.00	8.42	8.00	0.99	1.00	†0.95	1.00	30 00	3717	
6.35	0.52	0.41	9.16	9.00	8.14	8.00	1.02	1.00	†1.21	1.00	28 00	4613	
8.22	1.10	0.41	10.24	9.00	9.08	8.00	1.16	1.00	†1.47	1.00	30 00	3203	
8.17	1.03	0.82	11.34	9.00	10.33	8.00	1.01	1.00	†1.18	1.00	-----	3195	
6.53	0.94	0.82	9.18	9.00	8.24	8.00	0.94	1.00	†1.38	1.00	32 00	3514	
4.23	2.41	2.06	10.17	9.00	8.89	8.00	1.28	1.00	0.88	1.00	35 00	4057	
8.64	0.88	0.82	11.35	10.00	10.11	9.00	1.24	1.00	3.11	3.00	46.50	4179	
6.81	0.91	0.82	11.20	10.00	9.76	9.00	1.44	1.00	†3.13	3.00	48 00	3848	
7.64	*1.30	1.65	8.98	9.50	8.50	8.50	0.48	1.00	†0.97	1.00	38 00	4674	
6.53	0.65	0.41	14.16	9.00	9.26	8.00	4.90	1.00	†1.28	0.50	23.50	4318	
5.13	0.74	0.41	9.62	9.00	8.41	8.00	1.21	1.00	0.66	0.50	26.00	4388	
9.25	1.53	1.65	11.08	9.00	9.73	8.00	1.35	1.00	†2.89	3.00	54 00	4729	
5.70	0.54	0.41	11.62	9.00	7.91	8.00	3.71	1.00	*0.64	1.00	28.50	4097	
6.66	0.79	0.41	10.19	9.00	8.70	8.00	1.49	1.00	1.04	1.00	30 00	4834	
8.55	0.46	0.41	12.25	9.00	8.04	8.00	4.21	1.00	0.85	1.00	28 00	3774	
7.53	0.66	0.82	8.62	9.00	8.02	8.00	0.60	1.00	0.81	1.60	31 00	4675	
5.56	0.68	0.82	8.81	9.00	*7.79	8.00	1.02	1.00	1.03	1.00	-----	4602	
11.03	1.32	0.82	9.87	9.00	8.91	8.00	0.96	1.00	1.04	1.00	31 50	3189	
3.95	1.94	1.64	9.80	9.00	8.83	8.00	0.97	1.00	†2.05	2.00	47 50	4251	
4.34	0.84	0.82	7.77	8.00	7.02	7.00	0.75	1.00	1.00	1.00	31 00	4871	
4.28	0.89	0.82	7.72	8.00	6.93	7.00	0.79	1.00	1.03	1.00	30 00	4861	
5.27	0.86	0.82	8.11	9.00	*7.17	8.00	0.94	1.00	†1.78	1.50	35 00	3536	
5.85	0.84	0.82	7.64	9.00	*6.57	8.00	1.07	1.00	†1.31	1.50	32 00	3883	
5.38	0.84	0.82	7.55	9.00	*6.89	8.00	0.66	1.00	†1.33	1.50	40 00	3950	
6.03	3.19	3.28	8.16	7.00	5.86	6.00	2.30	1.00	†2.09	2.00	54 00	3534	
5.41	*2.55	3.28	7.45	7.00	6.11	6.00	1.34	1.00	†2.64	2.00	55 00	4872	

\*Deficient.

†No. 4333 as sulphate, 1.28%.

†No. 3552 As muriate, 0.39%; as sulphate, 1.19%.

†No. 4231 As sulphate, 1.43%.

†No. 4115 As sulphate, 1.32%.

†No. 3717 As sulphate, 0.95%.

†No. 4613 As sulphate, 1.21%.

†No. 3203 As muriate, 0.70%; as sulphate, 0.77%.

†No. 3195 as muriate, 0.56%; as sulphate, 0.62%.

†No. 3514 As muriate, 0.66%; as sulphate, 0.72%.

†No. 3848 As muriate, 2.67%; as sulphate, 0.46%.

†No. 4674 As sulphate, 0.97%.

†No. 4318 As muriate, 0.82%; as sulphate, 0.46%.

†No. 4729 As muriate, 0.70%; as sulphate, 2.19%.

†No. 4251 As muriate, 0.68%; as sulphate, 1.37%.

†No. 3536 as sulphate, 1.78%.

†No. 3883 As muriate, 0.68%; as sulphate, 0.63%.

†No. 3950 As muriate, 0.60%; as sulphate, 0.73%.

†No. 3534 As muriate, 0.68%; as sulphate, 1.41%.

†No. 4872 As muriate, 0.85%; as sulphate, 1.79%.



TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From--
	<b>F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.</b>	
4264	Royster's Continental Fertilizer, -----	J. C. Walker & Sons Co., Gap, -----
3429	Royster's Cuckoo Crop Grower, -----	Eulalia Mills, Coudersport, -----
3408	Royster's Cuckoo Crop Grower, -----	J. S. Waite & Co., Bellefonte, -----
4282	Royster's Cuckoo Crop Grower, -----	William H. Walker, Kennett Square, -----
4223	Royster's Dreadnaught Fertilizer, -----	C. H. H. Bauman, Scranton, -----
4573	Royster's Dreadnaught Fertilizer, -----	Jos. G. Cover, Masontown, -----
3890	Royster's Fish, Flesh & Fowl Phosphate, -----	Charles A. Mohrey & Sons, Cherryville, -----
3249	Royster's Lancaster County Tobacco Special Fertilizer, -----	S. A. Phillippy, Myerstown, -----
3252	Royster's Pennsylvania Potato Special Fertilizer, -----	S. A. Phillippy, Myerstown, -----
4094	Royster's Pennsylvania Potato Special Fertilizer, -----	John Strickler, Mifflinburg, -----
4867	Royster's Pennsylvania Potato Special Fertilizer, -----	Charles M. Wilhelm, South Bethlehem, -----
4267	Royster's Wheat, Oats and Barley Fertilizer, -----	H. E. Mullen, Christiana, -----
	<b>SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.</b>	
3196	Grass, Wheat and Oats, -----	Hellam Co-operative Association, Hellam, -----
3327	Guano, 1916, -----	T. E. Bradley, Spartansburg, -----
	<b>THE SCOTT FERTILIZER COMPANY, ELKTON, MD.</b>	
4349	Scott's Pennsylvania Potato Grower, -----	E. D. Greenawalt, Albany, -----
4153	Scott's Pennsylvania Potato Grower, -----	A. B. Groff, New Holland, -----
4279	Scott's Pennsylvania Potato Grower, -----	Edward Rupert, Oxford, -----
3545	Scott's Potato Grower, -----	Nathan Bollinger, Little Gap, -----
4721	Scott's Potato Grower, -----	Fred Cross, Adamstown, -----
3937	Scott's Potato and Truck, -----	Levi Beller, Elverson, -----
4709	Scott's Potato and Truck, -----	J. T. Wasser, Silver Spring, -----
4348	Scott's Sure Growth Superphosphate, -----	E. D. Greenawalt, Albany, -----
4715	Scott's Sure Growth Superphosphate, -----	Wilmer Kershner, Witmer, -----
3547	Scott's Wheat and Grass Grower, -----	Nathan Bollinger, Little Gap, -----
4350	Scott's Wheat and Grass Grower, -----	E. D. Greenawalt, Albany, -----



## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
7.32	2.50	2.47	10.32	8.50	8.79	8.00	1.53	0.50	†2.07	2.00	54 00	4264
5.44	1.04	0.82	9.04	8.50	*7.61	8.00	1.43	0.50	*†0.79	1.00	31 75	3429
6.99	1.15	0.82	9.32	8.50	8.21	8.00	1.11	0.50	†0.89	1.00	34 50	3408
5.82	0.94	0.82	8.85	8.50	7.98	8.00	0.87	0.50	†1.31	1.00	33 00	4282
4.64	1.73	1.65	9.57	8.50	8.83	8.00	0.74	0.50	†2.05	2.00	51 00	4223
5.74	1.70	1.65	8.93	8.50	7.92	8.00	1.01	0.50	†2.71	2.00	48 00	4573
5.90	1.80	1.65	9.72	8.50	8.21	8.00	1.51	0.50	†2.91	3.00	55 00	3890
5.17	*3.72	4.11	4.54	3.50	4.04	3.00	0.50	0.50	†1.62	1.00	50 50	3249
6.64	1.65	1.65	7.16	6.50	6.29	6.00	0.87	0.50	†3.10	3.00	45 10	3252
5.51	1.71	1.65	7.82	6.50	6.52	6.00	1.30	0.50	*†2.75	3.00	46 50	4094
5.43	1.75	1.65	10.26	6.50	9.42	6.00	0.84	0.50	†3.02	3.00	48 00	4867
4.66	1.75	0.82	10.22	8.50	9.57	8.00	0.65	0.50	†2.17	2.00	38 00	4267
9.22	1.49	1.23	10.28	11.00	*9.21	10.00	1.07	1.00	†1.26	1.00	-----	3196
6.50	0.98	0.82	11.01	11.00	*9.34	10.00	1.67	1.00	†1.00	1.00	37 00	3327
10.18	1.14	0.82	11.51	10.00	10.94	8.00	0.57	2.00	†2.29	2.00	40 00	4349
9.08	1.23	0.82	11.94	10.00	10.70	8.00	1.24	2.00	†2.04	2.00	40 00	4153
8.83	0.74	0.82	12.25	10.00	11.17	8.00	1.08	2.00	†2.15	2.00	38 00	4279
7.95	1.78	1.65	11.57	12.00	*9.49	10.00	2.08	2.00	†1.40	1.00	36 00	3545
6.87	1.69	1.65	11.37	12.00	*9.65	10.00	1.72	2.00	†1.10	1.00	40 00	4721
8.57	*2.30	2.50	10.97	11.00	9.13	9.00	1.84	2.00	†1.12	1.00	-----	3937
6.79	2.69	2.50	10.79	11.00	9.17	9.00	1.62	2.00	1.12	1.00	50 00	4709
8.34	1.64	1.65	11.33	10.00	9.42	8.00	1.91	2.00	†1.24	1.00	41 00	4348
6.90	1.79	1.65	11.02	10.00	9.39	8.00	1.63	2.00	†1.05	1.00	37 50	4715
7.51	0.48	0.41	12.65	12.00	11.49	10.00	1.16	2.00	†0.90	1.00	-----	3547
7.66	0.53	0.41	11.86	12.00	11.29	10.00	0.57	2.00	†1.23	1.00	-----	4350

\*Deficient.

†No. 4264 As muriate, 0.53%; as sulphate, 1.54%.

†No. 3429 As muriate, 0.54%; as sulphate, 0.25%.

†No. 3408 As sulphate, 0.89%.

†No. 4282 As sulphate, 1.31%.

†No. 4223 As sulphate, 2.03%.

†No. 4573 As muriate, 0.66%; as sulphate, 2.05%.

†No. 3890 As muriate, 0.76%; as sulphate, 2.15%.

†No. 3249 as muriate, 0.94%; as sulphate, 0.68%.

†No. 3252 As muriate, 0.51%; as sulphate, 2.59%.

†No. 4094 As muriate, 0.76%; as sulphate, 1.99%.

†No. 4267 As muriate, 0.51%; as sulphate, 1.66%.

†No. 4867 As muriate, 1.05%; as sulphate, 1.97%.

†No. 3196 As muriate, 0.75%; as sulphate, 0.51%.

†No. 3327 As muriate, 0.54%; as sulphate, 0.46%.

†No. 4349 As sulphate, 2.28%.

†No. 4153 As muriate, 0.55%; as sulphate, 1.49%.

†No. 4279 As sulphate, 2.15%.

†No. 3545 As muriate, 0.76%; as sulphate, 0.64%.

†No. 4721 As sulphate, 1.10%.

†No. 3937 As sulphate, 1.12%.

†No. 4348 As sulphate, 1.24%.

†No. 4715 As sulphate, 1.05%.

†No. 3547 As sulphate, 0.90%.

†No. 4350 As sulphate, 1.23%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.		Sample Taken From—	
3873	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD. Crop Producer, -----		Wm. D. Kunkel, Bath, -----	
4694	SWIFT & COMPANY, BALTIMORE, MD.		R. J. Young's Sons, New Galilee, -----	
4762	Swift's Grain Fertilizer, -----		A. F. Cassell, Rummerfield, -----	
4444	Swift's Reliable Grain Fertilizer, 1-8-1,-----		C. F. Gelbach, Duncannon, -----	
4789	Swift's Reliable Grain Fertilizer, 1-8-1,-----		E. R. Henry, Henryville, -----	
4164	Swift's Red Steer, -----		M. F. Bailey, Wellsboro, -----	
4038	Swift's Red Steer, -----		W. H. Rohmyer, Turn Pike, -----	
4102	Swift's Red Steer, -----		W. B. Winey, Middleburg, -----	
3933	Swift's Reliable Diamond "J," -----		Arthur A. Geiger, Joanna, -----	
4340	Swift's Standard Potato Fertilizer, -----		Lebanon Hardware Co., Lebanon, -----	
4039	Swift's Standard Potato Fertilizer, -----		W. H. Rehmyer, Turn Pike, -----	
4243	Swift's Standard Potato Fertilizer, -----		M. C. Stewart, Indiana, -----	
4763	Swift's Truck and Vegetable Fertilizer,-----		C. S. Hunt, Rummerfield, -----	
4808	Swift's Truck and Vegetable Fertilizer,-----		James S. Peters, Slatington, -----	
	I. P. THOMAS & SON CO., PHILADELPHIA, PA.			
3448	Champion Guano, -----		E. S. Risser, Palmyra, -----	
3786	Grain Special Fertilizer, -----		C. R. Henrie, Millville, -----	
3280	Grain Special Fertilizer, -----		John Maurer, Pitman, -----	
3253	Grain Special Fertilizer, -----		Monroe A. Weik, Kleinfeltersville, -----	
3449	Improved Fertilizer, -----		E. S. Risser, Palmyra, -----	
4667	Normal Fertilizer, -----		Luther Kinzer, Mifflintown, -----	
4623	Superior Superphosphate, -----		J. N. Walter, Stoyestown, -----	
3254	Superior Superphosphate, -----		Monroe A. Weik, Kleinfeltersville, -----	
4296	Tip Top Fertilizer, -----		James K. Lewis, Honeybrook, -----	
3450	Tip Top Fertilizer, -----		E. S. Risser, Palmyra, -----	
4297	Victor Potash Fertilizer, -----		James K. Lewis, Honeybrook, -----	
	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.			
4512	Golden Harvest Phosphate, 1916, -----		E. M. Curtis, Ariel, -----	
3621	Neptune Fish Compound, 1916, -----		Cook Grain, Feed & Supply Co., Dillsburg, -----	
3714	Neptune Fish Compound, 1916, -----		W. E. Manifold, Fawn Grove, -----	

## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
6.77	1.09	0.82	9.36	9.00	*7.04	8.00	2.32	1.00	†0.91	1.00	32 25	3873
4.39	0.82	0.82	10.52	8.00	8.71	8.00	1.81	-----	†2.23	2.00	40 50	4694
2.90	1.06	0.82	8.27	8.00	*6.55	8.00	1.72	-----	†1.04	1.00	33 00	4762
2.85	1.05	0.82	8.75	8.00	*7.36	8.00	1.39	-----	†1.22	1.00	32 50	4444
5.30	0.84	0.82	8.89	8.00	7.98	8.00	0.91	-----	†0.93	1.00	40 00	4789
9.01	1.71	1.65	8.55	8.00	8.00	8.00	0.55	-----	†2.00	2.00	45 00	4164
3.85	1.96	1.65	9.67	8.00	8.13	8.00	1.54	-----	1.82	2.00	44 00	4038
6.16	1.88	1.65	8.85	8.00	8.02	8.00	0.83	-----	†2.29	2.00	48 00	4102
3.35	0.80	0.41	8.41	7.00	7.07	7.00	1.34	-----	0.41	0.50	24 00	3933
6.50	1.65	1.65	9.68	8.00	8.00	8.00	1.68	-----	†3.06	3.00	55 00	4340
4.05	1.99	1.65	9.73	8.00	7.94	8.00	1.79	-----	*2.50	3.00	43 00	4039
6.92	1.66	1.65	11.03	8.00	8.99	8.00	2.04	-----	3.11	3.00	52.50	4243
5.72	1.87	1.65	11.03	8.00	8.11	8.00	2.92	-----	†2.35	1.00	39 00	4763
3.43	1.63	1.65	9.01	8.00	*7.62	8.00	1.39	-----	1.53	1.00	39 00	4808
9.84	2.19	1.65	9.71	8.50	*7.72	8.00	1.99	0.50	†1.17	1.00	-----	3448
7.63	0.83	0.82	9.67	8.50	8.80	8.00	0.87	0.50	†3.07	2.00	39 00	3786
9.59	1.15	0.82	10.08	8.50	8.01	8.00	2.07	0.50	†2.19	2.00	-----	3280
9.50	1.22	0.82	10.06	8.50	8.04	8.00	2.02	0.50	†2.23	2.00	-----	3253
10.09	1.08	0.82	11.95	10.50	9.82	10.00	2.13	0.50	†1.02	1.00	-----	3449
6.50	1.11	1.00	11.31	9.00	9.28	8.50	2.03	0.50	†1.01	1.00	32 00	4667
7.44	0.63	0.82	8.94	7.50	8.05	7.00	0.89	0.50	†1.33	1.00	32 00	4623
7.80	1.48	0.82	8.90	7.50	7.50	7.00	1.40	0.50	†0.96	1.00	-----	3254
9.71	*2.20	2.45	9.57	8.50	8.93	8.00	0.64	0.50	†1.23	1.00	43 25	4296
11.30	2.58	2.45	9.52	8.50	8.49	8.00	1.03	0.50	†1.12	1.00	-----	3450
9.75	0.91	0.82	14.69	12.50	13.08	12.00	1.61	0.50	†1.10	1.00	35 00	4297
6.22	0.87	0.82	10.22	9.00	8.04	8.00	2.18	1.00	†1.12	1.00	32 50	4512
6.69	1.26	0.82	8.70	8.00	7.63	7.00	1.07	1.00	†1.26	1.00	30 25	3621
6.67	0.92	0.82	8.84	8.00	7.73	7.00	1.11	1.00	†1.03	1.00	31 50	3714

\*Deficient.

†No. 3873 As sulphate, 0.91%.

†No. 4694 As muriate, 1.58%; as sulphate, 0.65%.

†No. 4762 As muriate, 0.60%; as sulphate, 0.44%.

†No. 4444 As muriate, 0.76%; as sulphate, 0.46%.

†No. 4789 As muriate, 0.66%; as sulphate, 0.27%.

†No. 4164 As muriate, 1.82%; as sulphate, 0.18%.

†No. 4102 As muriate, 2.04%; as sulphate, 0.25%.

†No. 4340 As muriate, 2.66%; as sulphate, 0.40%.

†No. 4763 As muriate, 2.06%; as sulphate, 0.29%.

†No. 3448 As sulphate, 1.17%.

†No. 3786 as muriate, 0.66%; as sulphate, 2.41%.

†No. 3280 As muriate, 0.65%; as sulphate, 1.54%.

†No. 3253 As muriate, 0.90%; as sulphate, 1.33%.

†No. 3449 As muriate, 0.70%; as sulphate, 0.32%.

†No. 4667 As muriate, 0.63%; as sulphate, 0.38%.

†No. 4623 As sulphate, 1.33%.

†No. 3254 As muriate, 0.68%; as sulphate, 0.28%.

†No. 4296 As muriate, 0.59%; as sulphate, 0.64%.

†No. 3450 As sulphate, 1.12%.

†No. 4297 As muriate, 0.56%; as sulphate, 0.54%.

†No. 4512 As sulphate, 1.12%.

†No. 3621 As muriate, 0.70%; as sulphate, 0.56%.

†No. 3714 As sulphate, 1.03%.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3744	Vegetable and Corn Fertilizer, 1916, ---	Frank A. Ackley, Westfield, -----
4514	Vegetable and Corn Fertilizer, 1916, ---	E. M. Curtis, Ariel, -----
3745	Welcome Brand Fertilizer, -----	Frank A. Ackley, Westfield, -----
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.	
4014	Farmers Favorite, -----	Charles Wegscheider, Line Lexington, ----
4012	Farmers Special, -----	George Kratz, Hatfield, -----
	VIRGINIA-CAROLINA CHEMICAL CO., OF DELAWARE, BALTIMORE, MD.	
4183	V. C. Champion Manure, -----	F. F. Harrison, Edinboro, -----
4366	V. C. Fish Bone & Potash Revised, -----	C. M. Harter, Wapwallopen, -----
	J. & R. WALTER, HANOVER, PA.	
4856	Walter's Crop Grower, -----	I. B. Stoner, Hanover, -----
4857	Walter's Crop Grower, -----	Lawrence Hilbert, Spring Grove, -----
	WASHINGTON, ALEXANDER & COOKE CO., CHARLES TOWN, W. VA.	
4393	W. A. & C.'s Wheat, Corn and Oats Mixture, -----	E. S. Kelly, Gettysburg, -----
	THE ROBERT A. WOOLDRIDGE COM- PANY, BALTIMORE, MD.	
4414	Champion Stag Phosphate, 1916, -----	W. S. Stuart, Carlisle, -----
3795	Wooldridge's Ammoniated Phosphate, --	D. C. Harpster, Port Matilda, -----
4100	Wooldridge's Chieftain Phosphate, 1916,--	Philip Ocker, Beavertown, -----
4851	Wooldridge's Chieftain Phosphate, 1916,--	H. D. Weisel, Hilltown, -----
4852	Wooldridge's Double Quick Phosphate, 1916, -----	H. D. Weisel, Hilltown, -----
3640	Wooldridge's Farmers Favorite Cereal Compound, 1916, -----	Sam Shearer, Seven Valley, -----
3776	Wooldridge's Farmers Favorite Cereal Compound, 1916, -----	H. V. Smith, Turbotville, -----
4849	Wooldridge's Farmers Favorite Cereal Compound, 1916, -----	H. D. Weisel, Hilltown, -----
3810	Wooldridge's Special Potato and Tobacco Fertilizer, 1916, -----	C. C. Catherman, Hartleton, -----
3777	Wooldridge's Special Potato and Tobacco Fertilizer, 1916, -----	H. V. Smith, Turbotville, -----
4850	Wooldridge's Special Potato and Tobacco Fertilizer, 1916, -----	H. D. Weisel, Hilltown, -----
4273	Wooldridge's Triumph Brand Phosphate, 1916, -----	Franklin G. Evens, Kelton, -----
	YORK CHEMICAL WORKS, YORK, PA.	
3638	Dempwolf's Half & Half, -----	J. C. Ernst & Co., York, -----
4429	Dempwolf's Half & Half, -----	E. H. Horst, Chambersburg, -----
3611	Dempwolf's Half & Half, -----	Jacob Rentzel, Manchester, -----

## FERTILIZERS—Continued.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
10.21	1.69	1.65	11.15	11.00	*9.56	10.00	1.59	1.00	†1.19	1.00	40 00	3744
10.00	*1.31	1.65	11.97	11.00	10.35	10.00	1.62	1.00	†1.22	1.00	40 50	4514
8.76	1.08	0.82	9.64	9.00	8.61	8.00	1.03	1.00	*†1.71	2.00	38 00	3745
7.32	1.88	1.64	7.40	6.00	6.58	6.00	0.82	-----	*†1.67	2.00	-----	4014
4.45	1.10	0.82	9.25	8.00	*7.46	8.00	1.79	-----	†0.97	1.00	31 00	4012
8.02	0.63	0.41	12.25	9.00	8.70	8.00	3.55	1.00	†1.16	1.00	31 35	4183
5.05	1.83	1.65	10.09	9.50	8.62	8.50	1.47	1.00	†1.00	1.00	-----	4366
†1.99	†0.26	0.17	†*0.13	0.42	-----	-----	-----	-----	†0.13	0.12	†10.00	4856
†1.35	†0.17	0.17	†*0.11	0.42	-----	-----	-----	-----	†0.07	0.12	†10.00	4857
5.56	0.49	0.41	9.02	9.00	7.91	8.00	1.11	1.00	1.19	1.00	24.00	4393
6.69	0.91	0.82	10.91	10.00	9.79	9.00	1.12	1.00	1.03	1.00	31 75	4414
7.51	1.08	0.82	9.44	9.00	8.18	8.00	1.26	1.00	†0.90	1.00	32 50	3795
6.81	1.91	1.65	10.84	10.00	10.10	9.00	0.74	1.00	†0.93	1.00	28 50	4100
7.11	1.75	1.65	10.61	10.00	9.65	9.00	0.96	1.00	*0.78	1.00	40 00	4851
8.36	1.92	2.06	10.13	9.00	9.57	8.00	0.56	1.00	0.95	1.00	43 00	4852
8.45	0.53	0.41	9.53	9.00	8.23	8.00	1.30	1.00	†0.92	1.00	-----	3640
8.80	1.07	0.41	9.44	9.00	8.37	8.00	1.07	1.00	†1.05	1.00	29 00	3776
6.19	0.56	0.41	9.77	9.00	8.88	8.00	0.89	1.00	0.96	1.00	29 50	4849
9.58	1.80	1.65	11.51	11.00	10.22	10.00	1.29	1.00	†1.28	1.00	40 50	3810
10.75	1.78	1.65	11.43	11.00	10.22	10.00	1.21	1.00	†1.35	1.00	40 00	3777
9.95	1.74	1.65	11.63	11.00	10.44	10.00	1.19	1.00	1.16	1.00	41 00	4850
10.36	1.29	1.23	12.09	11.00	11.40	10.00	0.69	1.00	†1.26	1.00	36 00	4273
7.45	0.83	0.82	8.14	-----	7.76	7.00	0.38	-----	†1.04	1.00	32 50	3638
2.85	0.80	0.82	9.86	-----	9.22	7.00	0.64	-----	†1.05	1.00	30 00	4429
8.36	0.93	0.82	9.63	-----	8.94	7.00	0.69	-----	1.02	1.00	31 50	3611

\*Deficient.

†No. 3744 As muriate, 0.59%; as sulphate, 0.60%.

†No. 4514 As sulphate, 1.22%.

†No. 3745 As muriate, 1.43%; as sulphate, 0.28%.

†No. 4014 As sulphate, 1.67%.

†No. 4012 As sulphate, 0.97%.

†No. 4183 As muriate, 0.81%; as sulphate, 0.35%.

†No. 4366 As sulphate, 1.00%.

†No. 3795 As muriate, 0.59%; as sulphate, 0.31%.

†No. 4100 As muriate, 0.68%; as sulphate, 0.25%.

†No. 3640 As sulphate, 0.92%.

†No. 3776 As muriate, 0.68%; as sulphate, 0.37%.

†No. 3810 As sulphate, 1.28%.

†No. 3777 As muriate, 0.84%; as sulphate, 0.51%.

†No. 4273 As muriate, 0.65%; as sulphate, 0.61%.

†No. 3638 As sulphate, 1.04%.

†No. 4429 As sulphate, 1.05%.

‡Excluded from average.



TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4586	Dempwolf's One-Eight-One, -----	W. F. Gnagey, Berlin, -----
3259	Dempwolf's One-Eight-One, -----	Jacob Plasterer, Lebanon, -----
3983	Dempwolf's One-Eight-One, -----	Harry Pyle & Sons, Chadds Ford Junction, -----
3279	Dempwolf's Plow Brand, -----	Felix Herb, Pitman, -----
3390	Dempwolf's Plow Brand, -----	E. H. Keen & Co., Parkesburg, -----
3614	Dempwolf's Plow Brand, -----	C. U. Spangler, Rossville, -----
4587	Dempwolf's Potato Manure, -----	W. F. Gnagey, Berlin, -----
3995	Dempwolf's Potato Manure, -----	Thomas Haines Co., Malvern, -----
4673	Dempwolf's Potato Manure, -----	R. D. Witmer, Thompsontown, -----
		Average. -----

## FERTILIZERS—Concluded.

Moisture.	NITROGEN		PHOSPHORIC ACID.						POTASH.		Selling price at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	%	%	%	%	\$	
9.51	0.65	0.82	10.77	-----	10.03	8.00	0.74	-----	1.30	1.00	32 50	4586
7.19	1.04	0.82	8.11	-----	*7.43	8.00	0.68	-----	†1.00	1.00	31 50	3259
5.84	*0.59	0.82	9.48	-----	8.97	8.00	0.51	-----	†1.09	1.00	32 50	3983
7.55	1.86	1.65	9.20	-----	8.41	8.00	0.79	-----	1.09	1.00	-----	3279
5.83	1.51	1.65	10.29	-----	9.32	8.00	0.97	-----	†1.00	1.00	34 50	3390
5.42	*1.45	1.65	9.58	-----	8.13	8.00	1.45	-----	†1.19	1.00	38 00	3614
8.22	0.75	0.82	8.20	-----	7.68	7.00	0.52	-----	3.52	3.00	42 85	4587
7.95	0.88	0.82	9.58	-----	9.52	7.00	0.06	-----	*2.66	3.00	44 00	3995
7.72	*0.54	0.82	7.68	-----	7.20	7.00	0.48	-----	†7.67	3.00	40 00	4673
7.19	1.43	-----	10.23	-----	8.79	-----	1.44	-----	1.29	-----	38 59	

\*Deficient.

†No. 3259 As sulphate, 1.00%.

†No. 3983 as sulphate, 1.09%.

†No. 3390 As muriate, 0.77%; as sulphate, 0.23%.

†No. 3614 As muriate, 0.62%; as sulphate, 0.57%.

†No. 4673 As sulphate, 7.67%.

TABLE NO. II.—NITROGEN AND  
Including Dissolved Bone

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3913	THE ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA. Amco Fertilizer, -----	Henry Fenstermacher, Andreas, -----
4174	THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, NEW YORK, N. Y. Ammoniated Fertilizer A., -----	C. E. Meneral, Liberty, -----
4800	Ammoniated Fertilizer A., -----	George Spangenburg, East Stroudsburg, -----
4620	Ammoniated Fertilizer A., -----	Alexander Trent, Coleman, -----
4494	Ammoniated Fertilizer A. A., -----	Farmers Supply Co., Ariel, -----
4326	Ammoniated Fertilizer A. A., -----	H. L. Orr, Tyrone, -----
4066	Ammoniated Fertilizer A. A., -----	F. E. Plummer, Wilmore, -----
3458	Ammoniated Fertilizer A. A. A., -----	W. J. Johnson, Sinking Springs, -----
4180	Ammoniated Fertilizer A. A. A., -----	H. E. Koch, North East, -----
3577	Ammoniated Fertilizer A. A. A., -----	D. W. Drawbaugh, Harrisburg, -----
4181	Ammoniated Fertilizer A. A. A. A., -----	H. E. Koch, North East, -----
3689	Ammoniated Superphosphate 1-8-0, -----	D. A. Hankey, Parnassus, -----
4929	Ammoniated Superphosphate 1-8-0, -----	G. B. Murphey, Red Lion, -----
3736	Ammoniated Superphosphate 1-8-0, -----	Stanley Wolf, Fishertown, -----
3987	Animal Base Special, -----	H. P. Passmore & Brother, Oxford, -----
4739	Bradley's Economy Fertilizer, -----	E. H. Johnson, Ulster, -----
4184	Bradley's Economy Fertilizer, -----	Skelton & Baker, Edinboro, -----
3495	Bradley's Economy Fertilizer, -----	S. O. Wright, Zelenople, -----
4773	Bradley's Golden Crop Compound, -----	J. G. Leighton, Tunkhannock, -----
4785	Bradley's Special Superior Compound, Revised, -----	I. W. Bunnell, Pleasant Mount, -----
4470	Bradley's Special Superior Compound, Revised, -----	A. L. Miller, Edella, -----
4775	Bradley's Truckers Delight, -----	R. S. Hardie, Mahanopeny, -----
4644	Crocker's Farmers Choice, -----	D. & W. R. Davis, Kane, -----
4746	Crocker's Farmers Choice, -----	Farmers Co-operative Co., Wysox, -----
4235	Crocker's Farmers Choice, -----	Gibson-Clary Co., Indiana, -----
4745	Crocker's Special Colonial Fertilizer, Revised, -----	Farmers Co-operative Co., Wysox, -----
4747	Crocker's Special Grain Grower, -----	Farmers Co-operative Co., Wysox, -----
4654	Crocker's Special Grain Grower, -----	L. A. Fisher & Co., Bradford, -----
4200	Crocker's Special Grain Grower, -----	Edgar Walters, Jamestown, -----
4009	Diamond Wheat and Grass Special, -----	A. H. Keeley & Sons, Schwenksville, -----
4812	Diamond Wheat and Grass Special, -----	L. D. Leiby, Germansville, -----
4485	East India Special Improved Compound, -----	G. A. Spencer, Waverly, -----
4484	East India Victor Special, 1916, -----	G. A. Spencer, Waverly, -----
3171	W. S. Farmer & Co. All Crop Mixture No. 1, -----	J. W. Shoemaker, Littlestown, -----
4023	W. S. Farmer & Co. All Crop Mixture No. 2, -----	Manifold & Wallace, High Rock, -----
4394	Homestead Good Grower, -----	G. P. M. Baker, Abbottstown, -----
3337	Milsom's Golden Eagle, -----	F. K. Dawdy, North East, -----
3542	Milsom's Potato Producer, -----	Aaron Zimmerman, Leighton, -----
3335	Milsom's Special Harrow Brand, -----	F. K. Dawdy, North East, -----
4202	Milsom's Special Phosphate, -----	W. A. Bright, Greenville, -----
4123	Milsom's Special Phosphate, -----	McConnell & Watterson, Kittanning, -----
3421	Milsom's Special Phosphate, -----	E. J. Rogers, Emporium, -----
4769	Soluble Grain Mixture, -----	Harrington & Wilson, Montrose, -----
4173	Soluble Grain Mixture, -----	C. E. Meneral, Liberty, -----
4215	Soluble Grain Mixture, -----	I. G. Williams, Ariel, -----
3351	Peerless Special, -----	Edward Brinton & Sons, West Chester, -----
4158	Peerless Special, -----	Eschbach & Eschbach, Millersville, -----
4322	Peerless Special, -----	H. L. Orr, Tyrone, -----
4400	Southern Fertilizer Co.'s Coot Brand Fertilizer, -----	D. E. Border, East Berlin, -----
4068	Wizzard Phosphate, -----	Christ Winey, McCalisterville, -----

# HOSPHORIC ACID FERTILIZERS.

d Other Like Products.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
8.83	1.66	1.65	12.63	10.00	9.31	6.00	3.32	4.00	36 00	3913
5.29	1.07	0.82	11.52	11.00	10.22	10.00	1.30	1.00	29 00	4174
6.09	1.83	0.82	12.28	11.00	9.97	10.00	2.31	1.00	35 00	4800
5.29	1.00	0.82	10.83	11.00	10.61	10.00	0.22	1.00	37 00	4494
8.83	1.59	1.65	12.40	11.00	11.29	10.00	1.11	1.00	37 00	4326
7.07	1.79	1.65	11.58	11.00	10.22	10.00	1.36	1.00	35 15	4066
9.87	1.75	1.65	11.39	11.00	10.11	10.00	1.28	1.00	40 00	3458
9.51	*2.23	2.47	11.47	11.00	10.07	10.00	1.40	1.00	42 50	4180
7.69	2.33	2.47	12.59	11.00	10.57	10.00	2.02	1.00	35 77	3577
5.36	2.83	2.47	11.41	11.00	10.16	10.00	1.25	1.00	49 00	4181
2.90	3.30	3.29	11.19	11.00	10.22	10.00	0.97	1.00	29 00	3689
8.17	0.94	0.82	9.98	9.00	8.87	8.00	1.11	1.00	26 00	4029
5.76	0.98	0.82	10.52	9.00	8.93	8.00	1.59	1.00	24 60	3736
6.94	1.03	0.82	9.58	9.00	8.27	8.00	1.31	1.00	36 00	3987
\$3.90	\$1.23	1.23	\$19.85	19.00				1.00	24 50	4739
7.05	0.86	0.82	12.12	11.00	10.12	10.00	2.00	1.00	29 00	4184
6.74	1.08	0.82	11.80	11.00	10.29	10.00	1.51	1.00	29 50	3495
5.72	0.90	0.82	11.65	11.00	9.83	10.00	1.82	1.00	40 00	4773
11.70	2.36	2.47	11.76	11.00	10.00	10.00	1.76	1.00		
2.71	1.60	1.65	12.85	11.00	*9.60	10.00	3.25	1.00	35 00	4785
9.14	*1.44	1.65	12.04	11.00	10.31	10.00	1.73	1.00	34 00	4470
13.16	3.10	3.29	11.99	11.00	10.06	10.00	1.93	1.00	45 00	4775
6.54	1.14	0.82	11.34	11.00	10.80	10.00	0.54	1.00	38 00	4644
7.03	0.82	0.82	12.68	11.00	10.01	10.00	2.67	1.00	27 50	4746
5.05	0.95	0.82	11.81	11.00	10.09	10.00	1.72	1.00	30 00	4235
12.01	2.29	2.47	12.65	11.00	10.24	10.00	2.41	1.00	40 00	4745
9.95	1.60	1.65	12.35	11.00	10.09	10.00	2.26	1.00	34 00	4747
6.60	*1.40	1.65	11.39	11.00	*9.76	10 00	1.63	1.00	42 00	4654
9.20	1.68	1.65	11.51	11.00	10.37	10.00	1.14	1.00	34 00	4200
4.86	1.96	1.23	11.86	11.00	10.71	10.00	1.15	1.00	34 00	4009
5.66	1.69	1.23	11.37	11.00	10.22	10.00	1.15	1.00	30 00	4812
5.03	1.63	1.65	12.96	11.00	11.02	10.00	1.94	1.00	38 25	4485
10.24	*3.02	3.29	12.50	11.00	10.87	10.00	1.63	1.00	50 00	4484
8.35	1.07	0.82	11.35	11.00	10.39	10.00	0.96	1.00	25 50	3171
9.39	1.67	1.65	12.07	11.00	10.85	10.00	1.22	1.00	31 00	4023
7.22	*1.84	2.06	9.54	9.00	8.52	8.00	1.02	1.00	31 00	4023
10.25	1.59	1.65	11.58	11.00	*9.70	10.00	1.88	1.00	36 00	4394
9.04	*2.97	3.29	12.26	11.00	10.33	10.00	1.93	1.00	36 00	3337
4.89	2.38	2.47	12.17	11.00	10.12	10.00	2.05	1.00	36 00	3542
6.08	1.10	0.82	11.81	11.00	10.53	10.00	1.28	1.00	42 00	3335
4.30	1.00	0.82	10.28	11.00	*9.25	10.00	1.03	1.00	29 00	4202
8.43	1.05	0.82	11.07	11.00	*9.22	10.00	1.85	1.00	35 00	4123
5.88	0.90	0.82	10.28	9.00	8.26	8.00	2.02	1.00	30 75	3421
9.50	1.72	0.82	10.26	9.00	8.73	8.00	1.53	1.00	28 00	4769
3.53	0.90	0.82	8.98	9.00	8.01	8.00	0.97	1.00	27 50	4173
8.71	1.71	1.65	9.64	9.00	8.43	8.00	1.21	1.00	37 00	4215
7.70	1.64	1.65	10.72	9.00	9.64	8.00	1.08	1.00	34 50	3351
4.95	1.63	1.65	10.20	9.00	9.10	8.00	1.10	1.00	36 00	4158
5.70	0.84	0.82	9.48	9.00	9.00	8.00	0.48	1.00	43 22	4322
3.95	0.99	0.41	9.98	9.00	8.88	8.00	1.10	1.00	24 50	4400
									46 68	4668

\*Deficient.

†Excluded from average.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
<b>AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.</b>		
4703	American Eagle Ammoniated Compound, -----	Paradise Farmers Association, Vintage, --
4040	American Eagle Ammoniated Compound, -----	W. H. Rehmyer, Turn Pike, -----
3243	American Eagle Ammoniated Compound, -----	N. R. Yost, Myerstown, -----
4139	American Eagle Potato and Truck Grower, -----	Lancaster County Farmers Assoc., Inc., Manheim, -----
3319	American Fish and Bone Special, -----	Leland Craig, Oil City, -----
4607	American Fish and Bone Special, -----	John G. Emert, Somerset, -----
3240	American Fish and Bone Special, -----	N. R. Yost, Myerstown, -----
4637	American Special Fish Guano, -----	John Emert, Somerset, -----
<b>ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.</b>		
3507	Armour's 1-10-0, -----	George W. Anderson, Cessner, -----
3852	Armour's 1-10-0, -----	Kane Milling & Grocery Co., Kane, -----
3877	Armour's 1-10-0, -----	Nazareth Coal and Lumber Co., Nazareth,
3571	Armour's 1.50-9-0, -----	S. H. Brinser, Middletown, -----
4797	Armour's 1.50-9-0, -----	George Spangenburg, East Stroudsburg, --
4552	Armour's 1.50-9-0, -----	George B. Sprowls, Claysville, -----
4432	Armour's 2-10-0, -----	Greencastle Elevator Co., Greencastle, --
3878	Armour's 2-10-0, -----	Nazareth Coal & Lumber Co., Nazareth, --
3677	Armour's 2-10-0, -----	Smith & Logan, Cabot, -----
4659	Armour's 3-10-0, -----	W. E. Sawyer, Wrights, -----
4832	Tuscarora 1.50-9-0, -----	George W. Amey, Richlandtown, -----
4119	Tuscarora 1-10-0, -----	Wm. Gates Estate, Kittanning, -----
<b>BAUGH &amp; SONS COMPANY, PHILADEL- PHIA, PA.</b>		
3179	Baugh's Ammoniated Superphosphate, --	H. D. & J. F. Bream, Gettysburg, -----
3712	Baugh's Ammoniated Superphosphate, --	W. E. Manifold, Fawn Grove, -----
4765	Baugh's Corn and Oats Fertilizer, -----	J. M. Ayres, Towanda, -----
4725	Baugh's Corn and Oats Fertilizer, -----	H. R. Lutz, Denver, -----
4614	Baugh's Corn and Oats Fertilizer, -----	C. H. Schmucker, Friedens, -----
3628	Baugh's Excelsior Guano, -----	H. H. Loose, Menges Mills, -----
3601	Baugh's Half and Half Mixture, -----	Brillinger & Swartz, Emigsville, -----
3809	Baugh's Half and Half Mixture, -----	G. W. Frankenberger, Millheim, -----
4749	Baugh's Half and Half Mixture, -----	H. G. Wright, Canton, -----
4724	Baugh's High Grade Ammoniated Animal Base, -----	H. R. Lutz, Denver, -----
3979	Baugh's High Grade Ammoniated Animal Base, -----	Richards & Schraeder, Concordville, -----
3265	Baugh's High Grade Ammoniated Animal Base, -----	C. G. Updegrave, Hegins, -----
3996	Baugh's Peninsula Grain Producer, -----	Thomas Haines Co., Malvern, -----
3557	Baugh's Peninsula Grain Producer, -----	Rauch & Swartzel, Clearfield, -----
3539	Baugh's Peninsula Grain Producer, -----	Henry A. Smith, Lehighton, -----
4457	Baugh's The Old Stand By: Dissolved Animal Base, -----	P. A. Enders, Halifax, -----
3193	Baugh's The Old Stand By: Dissolved Animal Base, -----	H. P. Kocher, Wrightsville, -----
4810	Baugh's The Old Stand By: Dissolved Animal Base, -----	H. E. Mantz, Saegersville, -----
4149	Baugh's Truckers Favorite, -----	Meno Graybill & Sons, Bareville, -----
3997	Baugh's Truckers Favorite, -----	Thomas Haines Co., Malvern, -----
3556	Baugh's Wheat Fertilizer, -----	Rauch & Swartzel, Clearfield, -----
<b>THE BERG COMPANY, PHILADELPHIA, PA.</b>		
3373	Berg's Animal Bone and Meat, -----	John W. Root, Kimberton, -----
3908	Berg's Special Bone Manure Without Potash, -----	Edward F. Bracken, Paoli, -----
3371	Berg's Special Crop Grower, -----	John W. Root, Kimberton, -----
3372	Berg's Special Wheat Grower, -----	John W. Root, Kimberton, -----



## PHOSPHORIC ACID FERTILIZERS—Continued.

FERTILIZER ANALYSIS										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
1.30	2.61	2.47	11.99	11.00	11.51	10.00	0.48	1.00	36 00	4703
1.92	2.33	2.47	11.35	11.00	11.22	10.00	0.13	1.00	38 00	4040
2.80	2.48	2.47	10.93	11.00	10.46	10.00	0.47	1.00	39 00	3243
1.60	3.14	3.29	8.93	9.00	8.38	8.00	0.55	1.00	43 25	4139
8.55	1.94	1.65	12.78	12.00	*10.65	11.00	2.13	1.00	32 40	3319
5.75	1.70	1.65	13.90	12.00	*10.56	11.00	3.34	1.00	36 00	4607
7.83	1.93	1.65	13.99	12.00	*10.44	11.00	3.55	1.00	34 50	3240
5.09	0.74	0.82	12.18	11.00	10.14	10.00	2.04	1.00	28 00	4637
4.93	1.34	0.82	11.90	10.50	*9.74	10.00	2.16	0.50	27 50	3507
3.90	1.01	0.82	11.28	10.50	9.98	10.00	1.30	0.50	32 00	3852
6.21	0.85	0.82	11.66	10.50	*9.34	10.00	2.32	0.50	26 60	3877
3.19	1.43	1.23	10.36	9.50	*8.69	9.00	1.67	0.50	18 65	3571
3.87	1.23	1.23	9.53	9.50	*8.74	9.00	0.79	0.50	40 00	4797
3.81	1.08	1.23	10.38	9.50	*8.73	9.00	1.65	0.50	-----	4552
3.38	1.59	1.65	11.66	10.50	10.24	10.00	1.42	0.50	22 00	4432
4.73	1.65	1.65	11.44	10.50	*9.40	10.00	2.04	0.50	33 10	3878
4.15	2.04	1.65	11.01	10.50	*9.17	10.00	1.84	0.50	38 50	3677
2.69	*2.09	2.47	13.61	10.50	10.15	10.00	3.46	0.50	45 00	4659
3.90	1.26	1.23	10.08	9.50	8.88	9.00	1.20	0.50	30 00	4832
3.60	1.06	0.82	11.52	10.50	10.07	10.00	1.45	0.50	30 00	4119
8.78	1.83	1.02	10.61	10.00	*9.70	10.00	0.91	-----	29 00	3179
9.06	1.20	1.02	12.07	10.00	11.37	10.00	0.70	-----	27 50	3712
5.61	1.76	1.65	11.56	10.00	10.42	10.00	1.14	-----	-----	4765
8.57	1.81	1.65	11.16	10.00	*9.26	10.00	1.90	-----	36 00	4725
5.20	1.76	1.65	10.88	10.00	9.86	10.00	1.02	-----	34 00	4614
7.10	1.75	1.65	11.52	10.00	*9.43	10.00	2.09	-----	34 50	3628
6.29	1.50	1.23	20.98	19.00	*10.52	12.00	10.46	7.00	36 00	3601
5.89	1.51	1.23	19.29	19.00	*8.42	12.00	10.87	7.00	35 88	3809
4.21	1.51	1.23	18.97	19.00	*9.93	12.00	9.04	7.00	37 00	4749
2.22	3.44	3.30	11.66	10.00	10.97	10.00	0.69	-----	38 00	4724
4.90	3.54	3.30	11.30	10.00	10.42	10.00	0.88	-----	46 00	3979
9.87	3.61	3.30	12.86	10.00	10.30	10.00	2.56	-----	45 00	3265
6.77	0.99	0.82	11.37	9.00	9.95	9.00	1.42	-----	27 00	3996
7.85	1.45	0.82	12.69	9.00	10.83	9.00	1.86	-----	30 00	3557
8.87	1.02	0.82	10.74	9.00	9.32	9.00	1.42	-----	25 50	3539
5.67	2.05	1.65	14.59	12.00	13.37	12.00	1.22	-----	33 50	4457
9.24	1.84	1.65	11.49	12.00	*10.46	12.00	1.03	-----	34 00	3193
7.29	1.92	1.65	13.94	12.00	12.96	12.00	0.98	-----	32 50	4810
11.87	2.64	2.47	11.51	10.00	10.81	10.00	0.70	-----	38 25	4149
5.61	2.42	2.47	11.31	10.00	10.80	10.00	0.51	-----	41 00	3997
4.55	2.05	1.65	11.56	10.00	*9.65	10.00	1.91	-----	36 00	3556
4.61	3.66	3.30	18.38	17.00	*8.79	14.00	9.59	3.00	45 00	3373
6.07	2.01	2.00	11.19	11.00	8.51	7.00	2.68	4.00	38 00	3998
6.15	2.46	1.65	14.67	14.00	10.29	10.00	4.38	4.00	37 00	3371
5.45	1.77	1.65	12.81	11.00	9.17	8.00	3.64	3.00	35 00	3372

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		
3612	Bowker's Ammoniated O. I. O. Phosphate, -----	G. W. Bemberger, Etters, -----
4397	Bowker's Ammoniated O. I. O. Phosphate, -----	A. G. Gobrecht, Abbottstown, -----
4292	Bowker's Ammoniated O. I. O. Phosphate, -----	Herman J. Mosteller, Glen Moore, -----
4371	Bowker's Superphosphate with Ammonia 1%, -----	H. B. Harned, Wyoming, -----
3863	Bowker's Superphosphate with Ammonia 1%, -----	Holmes & Gilfillan, Smethport, -----
4118	Bowker's Superphosphate with Ammonia 1%, -----	L. Todd Owens, Apollo, -----
4370	Bowker's Superphosphate with Ammonia 2%, -----	H. B. Harned, Wyoming, -----
3864	Bowker's Superphosphate with Ammonia 2%, -----	Holmes & Gilfillan, Smethport, -----
4290	Bowker's Superphosphate with Ammonia 2%, -----	Herman J. Mosteller, Glen Moore, -----
3464	Bowker's Superphosphate with Ammonia 3%, -----	William H. Seigfreid, Kempton, -----
3824	Bowker's Superphosphate with Ammonia 4%, -----	W. W. Gible, Brunnersville, -----
CAMBRIA FERTILIZER COMPANY, JOHNSTOWN, PA.		
4065	Standard Phosphate, -----	H. J. Eberly, Cresson, -----
THE CENTRAL CHEMICAL COMPANY, THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.		
4096	C. C. C. Acme Brand, -----	Joshia Biugaman, Middleburg, -----
4588	C. C. C. Acme Brand, -----	S. M. Hüngrer, Berlin, -----
4743	C. C. C. Ammoniated Phosphate, -----	Athens Milling Co., Athens, -----
4639	C. C. C. Bone Compound, -----	Lloyd Hay, Meyersdale, -----
4438	C. C. C. Bone Compound, -----	Miller & Son, Waynesboro, -----
3498	C. C. C. Dissolved Bone Compound, -----	H. E. Mason, Osterburg, -----
3497	C. C. C. Fish Bone Compound, -----	H. E. Mason, Osterburg, -----
3743	C. C. C. Fish Bone Compound, -----	J. L. Seagers, Westfield, -----
4627	C. C. C. Fish Bone Compound, -----	E. S. Thomas, Holsopple, -----
3747	C. C. C. Pride of the Valley, -----	Charles Chamberlin, Salinsville, -----
3438	C. C. C. Pride of the Valley, -----	C. R. Nichols, Shingle House, -----
3749	C. C. C. Special Bone Mixture, -----	Charles Chamberlin, Salinsville, -----
3806	C. C. C. Special Bone Mixture, -----	R. E. Stover, Aaronsburg, -----
4638	C. C. C. Superior, -----	Lloyd Hay, Meyersdale, -----
4439	C. C. C. Superior, -----	Miller & Son, Waynesboro, -----
3360	C. C. C. Superior, -----	Munhallaud & Dale, Mortonville, -----
3518	C. C. C. Truck Special, -----	H. E. Mason, Osterburg, -----
3266	C. C. C. Truck Special, -----	Samuel Savidge, Hegins, -----
4435	C. C. C. Truck Special, -----	B. R. Summer & Co., Waynesboro, -----
THE CHESAPEAKE CHEMICAL COMPANY, BALTIMORE, MD.		
3708	C. C. Fish and Tankage Phosphate, -----	J. Frank Grove, Stewartstown, -----
4363	C. C. Fish and Tankage Phosphate, -----	James Herman, Nescopeck, -----
3587	C. C. Gem Phosphate, -----	Milton Deitz & Co., Mechanicsburg, -----
3707	C. C. Grangers Phosphate, -----	J. Frank Grove, Stewartstown, -----
4364	C. C. Grangers Phosphate, -----	James Herman, Nescopeck, -----

## PHOSPHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
6.69	0.84	0.62	11.56	11.00	10.35	10.00	1.21	1.00	26 00	3612
6.78	0.92	0.62	11.24	11.00	10.82	10.00	0.42	1.00	25 00	4397
8.76	1.07	0.62	11.33	11.00	10.32	10.00	1.01	1.00	24 50	4292
5.30	0.83	0.82	12.27	11.00	11.38	10.00	0.89	1.00	27 00	4371
6.62	1.15	0.82	10.88	11.00	*9.52	10.00	1.36	1.00	33 25	3863
5.95	1.08	0.82	12.08	11.00	11.06	10.00	1.02	1.00	27 00	4118
7.46	1.54	1.65	12.11	11.00	10.52	10.00	1.59	1.00	32 75	4370
9.62	1.60	1.65	10.83	11.00	*9.45	10.00	1.38	1.00	41 50	3864
9.85	1.56	1.65	11.54	11.00	10.20	10.00	1.34	1.00	32 00	4290
9.03	2.49	2.47	11.56	11.00	9.98	10.00	1.58	1.00	38 50	3464
10.01	3.34	3.29	11.26	11.00	10.43	10.00	0.83	1.00	46 00	3824
11.25	1.68	1.50	11.05	9.00	7.94	7.00	3.11	2.00	38 00	4065
5.20	0.67	0.82	9.49	-----	8.80	8.00	0.69	-----	24 95	4096
6.59	0.80	0.82	9.29	-----	8.24	8.00	1.05	-----	24 90	4588
2.73	0.48	0.41	8.98	-----	8.30	8.00	0.68	-----	25 00	4743
9.81	1.16	1.25	14.94	-----	13.96	14.00	0.98	-----	32 50	4639
7.29	1.03	1.25	15.60	-----	14.32	14.00	1.28	-----	34 00	4438
6.28	1.85	1.85	13.87	-----	13.17	13.00	0.70	-----	38 00	3498
8.80	1.26	1.25	11.33	-----	10.21	10.00	1.12	-----	38 00	3497
8.78	1.13	1.25	11.75	-----	10.56	10.00	1.19	-----	34 00	3743
5.74	*0.92	1.25	11.67	-----	10.68	10.00	0.99	-----	33 00	4627
7.10	0.79	0.82	10.27	-----	*9.63	10.00	0.64	-----	28 50	3747
7.72	1.00	0.82	10.37	-----	*9.64	10.00	0.73	-----	28 00	3438
10.50	1.68	1.65	11.48	-----	10.83	10.00	0.65	-----	35 00	3749
7.62	1.80	1.65	11.42	-----	10.74	10.00	0.68	-----	-----	3806
5.50	0.68	0.82	13.99	-----	12.31	12.00	1.68	-----	28 00	4638
5.27	0.80	0.82	13.42	-----	11.99	12.00	1.43	-----	29 00	4439
7.80	0.85	0.82	11.95	-----	*11.54	12.00	0.41	-----	30 00	3360
9.53	2.90	2.50	10.96	-----	10.17	10.00	0.79	-----	38 00	3518
10.02	2.70	2.50	10.92	-----	10.14	10.00	0.78	-----	-----	3266
7.26	*1.94	2.50	12.03	-----	10.73	10.00	1.30	-----	39 00	4435
6.77	*0.90	1.23	9.57	9.00	8.18	8.00	1.39	1.00	27 50	3708
7.00	1.59	1.23	10.87	9.00	8.64	8.00	2.23	1.00	26 00	4363
6.70	0.80	6.82	10.26	9.00	8.64	8.00	1.62	1.00	23 75	3587
9.08	*1.13	1.64	13.33	11.00	11.42	10.00	1.91	1.00	32 60	3707
4.98	1.60	1.64	12.26	11.00	*9.33	10.00	2.93	1.00	-----	4364

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
<b>COE-MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.</b>		
3399	E. Frank Coe's Famous Prize Brand Grain and Grass Fertilizer, 1916, -----	J. H. Ross, Linden Hall, -----
3591	E. Frank Coe's High Grade Ammoniated Superphosphate, 1916, -----	John S. Kinportz, Mechanicsburg, -----
4310	E. Frank Coe's High Grade Ammoniated Superphosphate, 1916, -----	W. S. Suckling, Hollidaysburg, -----
3942	E. Frank Coe's High Grade Ammoniated Superphosphate, 1916, -----	A. F. Wentzel, Lorane, -----
3398	E. Frank Coe's Morcoe Top Dresser without Potash, -----	Elmer Evy, Lemont, -----
4630	E. Frank Coe's Original Ammoniated Dissolved Phosphate, 1916, -----	E. M. Hayes, Windber, -----
4032	E. Frank Coe's Original Ammoniated Dissolved Phosphate, 1916, -----	Milton Lehmon, Dallastown, -----
4287	E. Frank Coe's Original Ammoniated Dissolved Phosphate, 1916, -----	John W. Root, Kimberton, -----
4368	E. Frank Coe's Prolific Crop Producer, 1916, -----	A. T. Brown, Nescopeck, -----
3679	E. Frank Coe's Prolific Crop Producer, 1916, -----	The I. W. Scott Co., Pittsburgh, -----
4472	E. Frank Coe's Prolific Crop Producer, 1916, -----	E. E. White, Clarks Green, -----
4572	E. Frank Coe's XXV Ammoniated Phosphate, 1916, -----	L. T. Laidley, Carmichaels, -----
3592	E. Frank Coe's XXV Ammoniated Phosphate, 1916, -----	John S. Kinportz, Mechanicsburg, -----
4288	E. Frank Coe's XXV Ammoniated Phosphate, 1916, -----	John W. Root, Kimberton, -----
<b>COLUMBIA GUANO COMPANY, BALTIMORE, MD.</b>		
3296	Columbia Corn and Oats Fertilizer, -----	C. L. Shipman, Hughesville, -----
4617	Columbia Corn and Oats Fertilizer, -----	J. H. Woy, Coleman, -----
3374	Columbia Duplex Ammoniated Phosphate, -----	John W. Root, Kimberton, -----
3295	Columbia Duplex Ammoniated Phosphate, -----	C. L. Shipman, Hughesville, -----
4618	Columbia Duplex Ammoniated Phosphate, -----	J. H. Woy, Coleman, -----
<b>THE CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.</b>		
3765	Consumers Pure Sure Ammoniated Bone Phosphate, -----	Equity Co-operative Exchange, Wellsboro, -----
<b>JOSIAH COPE &amp; COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.</b>		
3940	Ammoniated Fertilizer A. A., -----	Amos K. Stoltzfus, Elverson, -----
3356	Ammoniated Fertilizer A. A., -----	F. E. Bailey, Northbrook, -----
3626	Ammoniated Fertilizer A. A., -----	J. J. Jacobs, York Springs, -----
4698	Fish Guano, -----	Jones Evanson, Christiana, -----
4699	Fish Phosphate, -----	Jones Evanson, Christiana, -----
4035	Fish Phosphate, -----	W. H. Rehmyer, Turn Pike, -----
3170	Fish Phosphate, -----	J. V. Ulerich, Littlestown, -----
<b>THE JAMES G. DOWNWARD COMPANY, COATESVILLE, PA.</b>		
3964	Ammoniated Phosphate, -----	Isaac Tomlinson, Huntingdon Valley, -----
4731	Ammoniated Phosphate, -----	A. S. Young, Washington Boro., -----
3965	Pioneer Potato Phosphate, -----	Isaac Tomlinson, Huntingdon Valley, -----



## PHORIC ACID FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
7.56	1.16	0.82	9.94	9.00	8.84	8.00	1.10	1.00	25 25	3399
8.23	2.58	2.47	11.86	11.00	10.50	10.00	1.36	1.00	38 75	3591
2.86	2.65	2.47	11.67	11.00	10.82	10.00	0.85	1.00	44 00	4310
7.62	2.30	2.47	11.65	11.00	10.18	10.00	1.47	1.00	-----	3942
8.15	*5.60	8.23	7.50	6.00	7.00	5.00	0.50	1.00	-----	3398
7.13	1.68	1.65	11.48	11.00	10.42	10.00	1.06	1.00	34 00	4630
7.07	1.99	1.65	11.39	11.00	10.73	10.00	0.66	1.00	32 15	4032
10.21	1.66	1.65	12.78	11.00	11.08	10.00	1.70	1.00	38 00	4287
9.84	*2.91	3.29	11.99	11.00	9.90	10.00	2.09	1.00	43 00	4368
4.08	*2.93	3.29	11.28	11.00	10.07	10.00	1.21	1.00	54 00	3679
9.75	*2.82	3.29	12.77	11.00	10.96	10.00	1.81	1.00	47 50	4472
5.28	0.93	0.82	11.56	11.00	10.05	10.00	1.51	1.00	29 20	4572
6.35	1.38	0.82	11.80	11.00	11.12	10.00	0.68	1.00	25 75	3592
9.69	1.11	0.82	11.65	11.00	10.64	10.00	1.01	1.00	31 00	4288
5.98	1.44	0.82	11.21	8.50	10.06	8.00	1.15	0.50	26 00	3296
3.06	0.75	0.82	9.06	8.50	*7.31	8.00	1.75	0.50	25 25	4617
6.13	2.21	1.65	11.43	10.50	9.81	10.00	1.62	0.50	37 00	3374
2.91	1.93	1.65	10.89	10.50	*9.72	10.00	1.17	0.50	34 00	3295
3.94	1.89	1.65	12.02	10.50	10.55	10.00	1.47	0.50	33 25	4618
7.53	1.94	1.65	12.00	11.00	11.76	10.00	0.24	1.00	33 00	3765
7.84	1.60	1.65	11.54	11.00	10.30	10.00	1.24	1.00	-----	3940
11.73	1.72	1.65	10.94	11.00	10.34	10.00	0.60	1.00	35 00	3356
7.42	1.89	1.65	11.74	11.00	10.64	10.00	1.10	1.00	-----	3626
7.15	1.56	1.65	9.01	9.00	8.08	8.00	0.93	1.00	32 00	4698
4.97	0.51	0.41	9.93	9.00	8.27	8.00	0.66	1.00	23 50	4699
4.92	0.67	0.41	8.94	9.00	8.20	8.00	0.74	1.00	21 50	4035
6.88	1.05	0.41	9.36	9.00	8.57	8.00	0.79	1.00	21 50	3170
8.54	*0.59	0.82	10.86	11.00	10.18	10.00	0.68	1.00	31 00	3964
10.85	*0.36	0.82	11.47	11.00	11.15	10.00	0.32	1.00	36 00	4731
15.92	*1.87	2.46	10.78	11.00	*9.63	10.00	1.15	1.00	43 00	3965

\*Deficient.

TABLE II.—NITROGEN AND PHOSPHORUS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	DuBOIS FERTILIZER WORKS, INC., DuBOIS, PA.	
3558	DuBois General Crop Grower, 1918, -----	George Burnham, Eldred, -----
4647	DuBois General Crop Grower, 1918, -----	Alanson Kinney, Port Allegany, -----
3311	DuBois General Crop Grower, 1918, -----	S. Leroy Tuttle, Franklin, -----
4307	DuBois Grain and Corn, 1918, -----	M. R. Brumbaugh & Son, Martinsburg, -----
3687	DuBois Grain and Corn, 1918, -----	D. A. Hankey, Parnassus, -----
4679	DuBois Grain and Corn, 1918, -----	H. E. Lutz, Newton Hamilton, -----
	WALLACE DUNGAN, DOYLESTOWN, PA.	
4886	Pebble Hill Home Made Animal Mixture, -----	Wallace Dungan, Doylestown, -----
4885	Pebble Hill Home Made Animal Mixture, -----	Wallace Dungan, Doylestown, -----
	EASTERN GUANO COMPANY, NEW YORK, N. Y.	
4688	Eastern Bone Compound, -----	J. P. Johnston, Mercer, -----
3214	Eastern Crop Grower, -----	John A. Magee Co., Clarion, -----
3215	Eastern Fish Bone Mixture, -----	John A. Magee Co., Clarion, -----
	AMOS EBY & COMPANY, LEAMAN PLACE, PA.	
4263	Pequea Ammoniated, -----	Clayton Rauck, Leaman Place, -----
4258	Pequea Economy, -----	Clayton Rauck, Leaman Place, -----
	THE ERIE REDUCTION COMPANY, ERIE, PA.	
3330	Acidulated Fish Special, -----	W. D. Ripley, Wesleyville, -----
	EUREKA CHEMICAL COMPANY, BALTIMORE, MD.	
3579	Eureka C. I. S. Special, -----	Daniel Mader, Harrisburg, -----
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
3821	Farmers Club, -----	W. B. Gochnauer, Lititz, -----
4453	Farmers Crop Grower, -----	B. F. Horting, Newport, -----
3838	Farmers Crop Grower, -----	H. H. Martin, Manheim, -----
3447	Farmers Golden Sheaf, -----	Benjamin Gannen, Elizabethtown, -----
3570	Farmers Golden Sheaf, -----	Simon P. Garver, Hummelstown, -----
4455	Farmers Golden Sheaf, -----	B. F. Horting, Newport, -----
3839	Grain and Grass Special, -----	H. H. Martin, Manheim, -----
4101	Grain and Grass Special, -----	Steininger Brothers, Middleburg, -----
3446	Potato, Tobacco and Truck Manure, -----	Benjamin Gannen, Elizabethtown, -----
3842	Potato, Tobacco and Truck Manure, -----	H. H. Martin, Manheim, -----
	FARMERS FERTILIZER & FEED COMPANY, WESTMINSTER, MD.	
4422	Carroll Phosphate, -----	Jacob Garman, Shippensburg, -----
	GREENCASTLE FERTILIZER, HIDE AND RENDERING CO., GREENCASTLE, PA.	
4430	Cumberland Valley Special, -----	C. D. Gillian, Chambersburg, -----
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.	
3658	Blood and Bone Mixture, -----	Willis C. Herr, Strausburg, -----
4635	Blood and Bone Mixture, -----	L. A. Meyers, Hooversville, -----
3303	Cereal Mixture, -----	Artley Brothers, Muncy, -----
3610	Cereal Mixture, -----	George A. Wolf & Sons, Mt. Wolf, -----
3173	Farmers Bone Mixture, -----	W. A. Diehl, New Oxford, -----
3308	Farmers Bone Mixture, -----	E. L. White, Danville, -----
3609	Farmers Bone Mixture, -----	George A. Wolf & Sons, Mt. Wolf, -----
3359	Fish and Bone Mixture, -----	F. E. Bailey, Northbrook, -----
3484	Fish and Bone Mixture, -----	Harmony Cereal Mills, Harmony, -----
3289	Fish and Bone Mixture, -----	Weaver & Callahan, Montoursville, -----
3175	Peerless Mixture, -----	W. A. Diehl, New Oxford, -----
3932	Peerless Mixture, -----	Arthur Geiger, Joanna, -----

## PHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
8.00	*1.44	1.64	10.18	11.00	*9.10	10.00	1.08	1.00	34 25	3858
6.47	1.61	1.64	9.73	11.00	*9.09	10.00	0.64	1.00	36 00	4647
8.30	*1.39	1.64	10.77	11.00	*9.39	10.00	1.38	1.00	35 00	3311
10.50	0.85	0.82	9.39	9.00	8.76	8.00	0.63	1.00	26 00	4307
11.97	0.71	0.82	8.66	9.00	7.92	8.00	0.74	1.00	29 00	3687
2.41	1.03	0.82	7.58	9.00	*7.35	8.00	0.23	1.00	27 00	4679
8.45	2.48	2.40	12.75	13.00	*9.34	10.00	3.41	3.00	45 00	4886
8.11	2.71	2.40	13.32	13.00	10.17	10.00	3.15	3.00	45 00	4885
7.86	*1.36	1.65	12.28	-----	10.48	10.00	1.80	-----	34 00	4688
8.98	0.86	0.82	8.89	-----	7.86	8.00	1.03	-----	27 25	3214
8.46	1.33	1.25	11.30	-----	10.13	10.00	1.17	-----	33 00	3215
11.10	1.06	1.03	12.08	12.00	11.00	10.00	1.08	2.00	27 50	4263
9.71	1.80	1.85	12.44	12.00	10.37	10.00	2.07	2.00	33 00	4258
6.22	1.26	1.03	11.47	11.50	*8.89	9.50	2.58	2.00	29 75	3330
4.31	2.58	2.47	8.97	8.50	*7.73	8.00	1.24	0.40	40 00	3579
14.18	*2.27	2.47	11.00	9.00	8.53	8.00	2.47	1.00	41 80	3821
9.98	0.72	0.82	10.10	9.00	9.00	8.00	1.10	1.00	24 00	4453
8.78	0.88	0.82	10.75	9.00	9.14	8.00	1.61	1.00	28 00	3838
14.31	1.95	1.65	12.12	11.00	10.96	10.00	1.16	1.00	-----	3447
15.16	*1.44	1.65	12.05	11.00	11.39	10.00	0.66	1.00	32 50	3570
13.37	*1.18	1.65	12.22	11.00	11.15	10.00	1.07	1.00	32 00	4455
12.31	0.75	0.82	11.54	11.00	11.28	10.00	0.26	1.00	29 50	3839
9.11	1.29	0.82	12.05	11.00	10.62	10.00	1.43	1.00	26 00	4101
14.11	3.20	3.28	10.40	9.00	8.72	8.00	1.68	1.00	-----	3446
12.43	*3.06	3.28	10.82	9.00	8.08	8.00	2.74	1.00	45 00	3842
1.29	0.62	0.41	7.74	9.00	*7.36	8.00	0.38	1.00	23 75	4422
4.95	*0.94	1.65	16.93	15.00	15.44	10.00	1.49	5.00	28 00	4430
9.79	*2.89	3.30	10.75	10.00	9.02	9.00	1.73	1.00	48 00	3658
9.81	*2.64	3.30	10.80	10.00	9.52	9.00	1.28	1.00	-----	4635
4.81	0.93	0.85	10.55	9.00	9.36	8.00	1.19	1.00	28 00	3303
7.30	0.97	0.85	8.74	9.00	*7.71	8.00	1.03	1.00	26 00	3610
12.17	1.70	1.65	8.87	10.00	*8.14	9.00	0.73	1.00	32 00	3173
10.05	1.59	1.65	9.49	10.00	*8.78	9.00	0.71	1.00	32 50	3308
13.30	1.48	1.65	10.35	10.00	9.46	9.00	0.89	1.00	33 00	3609
7.97	*1.11	1.50	8.84	8.00	7.37	7.00	1.47	1.00	30 50	3359
9.30	1.44	1.50	8.20	8.00	*6.66	7.00	1.54	1.00	30 75	3484
7.61	*1.22	1.50	8.98	8.00	7.36	7.00	1.62	1.00	34 00	3289
4.97	0.90	0.41	7.83	9.00	*7.06	8.00	0.77	1.00	21 75	3175
3.94	0.75	0.41	12.21	9.00	9.28	8.00	2.93	1.00	23 00	3932

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3485	Peerless Mixture, -----	Harmony Cereal Mills, Harmony, -----
3306	Pure Dissolved Animal Bone, -----	E. L. White, Danville, -----
4456	Queen Guano, -----	Isaac Gilbert, Halifax, -----
3660	Queen Guano, -----	Willis C. Herr, Strausburg, -----
3711	Soft Ground Bone Meal, -----	Anderson Brothers, New Park, -----
3661	Soft Ground Bone Meal, -----	Willis C. Herr, Strausburg, -----
3369	Soft Ground Bone Meal, -----	A. M. F. Stiteler, Uwchland, -----
4146	Truckers Manure Substitute, -----	Ezra Groff, Bareville, -----
3657	Truckers Manure Substitute, -----	Willis C. Herr, Strausburg, -----
3709	Truckers Manure Substitute, -----	J. C. Leib & Co., Stewartstown, -----
	S. M. HESS & BROTHER, INC., SUB- SIDIARY OF THE AMERICAN AGRI- CULTURAL CHEMICAL CO., PHILA- DELPHIA, PA.	
3818	Ammoniated Grain Grower, -----	Buffalo Valley Producers & Consumers Corporation, Lewisburg.
4051	Ammoniated Grain Grower, -----	O. S. Copenhaver, Shirleysburg, -----
3334	Ammoniated Grain Grower, -----	Stow Lumber & Coal Co., Harbor Creek,
4084	Potato Crop Grower, -----	Buffalo Valley Producers & Consumers Corporation, Lewisburg.
4011	Potato Crop Grower, -----	Jonas Hiltbeitel, Green Lane, -----
4379	Potato Crop Grower, -----	C. L. Tressler, Conyngham, -----
4083	Reliable Superphosphate, -----	Buffalo Valley Producers & Consumers Corporation, Lewisburg.
4757	Standard Superphosphate, -----	J. M. Heverley, New Albany, -----
3817	Superior Superphosphate, -----	Buffalo Valley Producers & Consumers Corporation, Lewisburg.
4684	Superior Superphosphate, -----	John Chisholm, Mercer, -----
4380	Superior Superphosphate, -----	C. L. Tressler, Conyngham, -----
	H U B B A R D FERTILIZER COMPANY, BALTIMORE, MD.	
3693	Hubbard's Ammoniated Fertilizer, -----	J. G. Leese, Hokes, -----
3455	Hubbard's Columbia Phosphate, -----	J. R. Meek, Meckville, -----
3629	Hubbard's Columbia Phosphate, -----	J. E. Moul, Iron Ridge, -----
4496	Hubbard's Excelsior Mixture, -----	Farmers Supply Co., Ariel, -----
3692	Hubbard's Excelsior Mixture, -----	J. G. Leese, Hokes, -----
4732	Hubbard's Excelsior Mixture, -----	Wysox Produce Co., Wysox, -----
3802	Hubbard's Grangers' Favorite, -----	H. D. Rossman, Centre Hall, -----
4678	Hubbard's Oriental Guano, -----	Wm. M. Atkinson, McVeytown, -----
	M. P. HUBBARD COMPANY, INC., BALTIMORE, MD.	
4663	Hubbard's Active Phosphate, -----	F. A. Bingaman, Port Trevorton, -----
4708	Hubbard's Active Phosphate, -----	A. Herr & Brother, Quarryville, -----
3700	Hubbard's Active Phosphate, -----	J. P. Schuchart, New Freedom, -----
3190	Hubbard's Ever Ready Compound, -----	H. E. Bailey, Wrightsville, -----
4707	Hubbard's Ever Ready Compound, -----	A. Herr & Brother, Quarryville, -----
4464	Hubbard's Ever Ready Compound, -----	P. W. G. Raker, Elizabethville, -----
4706	Hubbard's Great Harvest, -----	A. Herr & Brother, Quarryville, -----
4028	Hubbard's Great Harvest, -----	G. B. Murphey, Red Lion, -----
4465	Hubbard's Great Harvest, -----	P. W. G. Raker, Elizabethville, -----
3191	Hubbard's Slaughter House Formula, -----	H. E. Bailey, Wrightsville, -----
	INTERNATIONAL AGRICULTURAL COR- PORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
3427	Buffalo Ammoniated Phosphate, -----	Eulalia Mills, Coudersport, -----
4661	Buffalo Ammoniated Phosphate, -----	A. T. Sarson, Kane, -----
3231	Buffalo Crop Grower, -----	Punxsutawney Lumber & Supply Co., Punxsutawney.
4220	Buffalo Farmers Choice, -----	Giles F. Clark, Scranton, -----
4203	Buffalo Farmers Choice, -----	A. C. Daugherty, Grove City, -----
3428	Buffalo Farmers Choice, -----	Eulalia Mills, Coudersport, -----



## PHOSPHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS										
Moisture	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
6.96	0.71	0.41	9.82	9.00	8.39	8.00	1.43	1.00	23 50	3485
4.37	1.91	2.00	12.11	11.00	10.73	10.00	1.38	1.00	29 00	3306
7.16	0.90	0.85	12.25	10.00	9.27	9.00	2.98	1.00	21 50	4456
8.76	1.15	0.85	12.03	10.00	10.21	9.00	1.82	1.00	30 00	3660
4.13	2.54	2.50	*9.91	11.00					45 00	3711
3.63	*2.26	2.50	*9.50	11.00					48 00	3661
5.23	2.34	2.50	*10.47	11.00					43 00	3369
7.31	2.89	2.75	11.60	6.00	8.26	5.00	3.34	1.00	37 50	4146
7.79	2.78	2.75	10.96	6.00	6.93	5.00	4.03	1.00	42 00	3657
10.02	2.85	2.75	6.90	6.00	5.43	5.00	1.42	1.00	38 00	3709
6.39	1.03	0.82	9.66	9.00	8.08	8.00	1.58	1.00	25 00	3818
4.85	1.18	0.82	9.44	9.00	8.23	8.00	1.21	1.00	27 00	4051
8.11	0.97	0.82	9.57	9.00	*7.72	8.00	1.85	1.00	26 00	3334
8.50	1.65	1.65	9.22	9.00	8.02	8.00	1.20	1.00	31 50	4084
6.82	1.62	1.65	9.43	9.00	8.38	8.00	1.05	1.00	37 00	4011
6.92	1.63	1.65	10.82	9.00	10.14	8.00	0.68	1.00	30 00	4379
4.85	2.83	2.47	12.03	11.00	10.72	10.00	1.31	1.00	39 50	4083
6.79	0.94	0.82	12.04	11.00	10.22	10.00	1.82	1.00	27 75	4757
9.27	1.81	1.65	11.47	11.00	10.23	10.00	1.24	1.00	33 00	3817
8.85	1.64	1.65	11.44	11.00	*9.40	10.00	2.04	1.00	35 25	4684
7.00	1.63	1.65	11.03	11.00	10.39	10.00	0.64	1.00	31 00	4380
8.91	2.61	2.46	11.60	11.00	10.61	10.00	0.99	1.00	37 00	3693
6.07	0.96	0.82	8.46	9.00	*7.45	8.00	1.01	1.00		3455
4.71	0.94	0.82	10.73	9.00	7.87	8.00	2.86	1.00	24 50	3629
7.24	1.88	1.64	12.82	11.00	10.45	10.00	2.37	1.00	36 00	4496
8.74	1.84	1.64	11.49	11.00	10.34	10.00	1.15	1.00	33 00	3692
8.73	1.89	1.64	10.57	11.00	10.05	10.00	0.52	1.00	33 00	4732
4.35	0.73	0.41	7.53	7.00	7.44	6.00	0.69	1.00	23 67	3802
4.22	0.78	0.82	12.73	11.00	10.37	10.00	2.36	1.00	30 00	4678
3.02	0.44	0.42	8.93	9.50	8.51	8.00	0.42	1.50	24 00	4663
4.03	0.65	0.42	7.83	9.50	*7.42	8.00	0.41	1.50	21 50	4703
4.03	0.75	0.42	8.99	9.50	8.49	8.00	0.50	1.50	24 00	3700
8.05	0.98	0.83	10.52	11.00	*9.69	10.00	0.83	1.00		3190
8.03	0.89	0.83	10.92	11.00	10.27	10.00	0.65	1.00	26 00	4707
7.89	0.81	0.83	12.54	11.00	12.27	10.00	0.27	1.00	26 85	4464
5.05	1.89	1.66	12.63	11.00	9.81	10.00	2.82	1.00	32 00	4706
11.31	1.74	1.66	11.16	11.00	9.99	10.00	1.17	1.00	32 00	4028
7.32	1.93	1.66	12.41	11.00	11.50	10.00	0.91	1.00	33 35	4465
8.79	1.89	1.66	14.92	14.00	13.16	13.00	1.76	1.00		3191
8.48	1.49	1.20	13.44	13.00	12.05	12.00	1.39	1.00	32 00	3427
7.02	1.45	1.20	12.67	13.00	*11.32	12.00	1.35	1.00	36 00	4661
6.75	0.84	0.80	8.37	9.00	*7.53	8.00	0.84	1.00	28 00	3231
4.95	2.03	0.80	11.33	11.00	10.12	10.00	1.21	1.00	35 00	4220
5.30	1.57	0.80	10.46	11.00	*9.67	10.00	0.79	1.00	31 00	4203
3.10	1.14	0.80	10.05	11.00	*8.77	10.00	1.28	1.00	27 00	3428

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4166	Buffalo Ideal Wheat and Corn, -----	G. C. Reuscher, Blossburg, -----
4169	Buffalo Vegetable and Potato, -----	G. C. Reuscher, Blossburg, -----
3217	I. A. C. General Crop, -----	J. H. Young, Strattonville, -----
<b>THE JARECKI CHEMICAL COMPANY,</b> SANDUSKY, OHIO.		
4190	Ammoniated Phosphate, -----	C. C. Good, North Girard, -----
4601	Ammoniated Phosphate, -----	S. S. Mosholder, Rockwood, -----
4695	Cereals, -----	John Bronson, New Galilee, -----
<b>KEYSTONE BONE FERTILIZER COM-</b> <b>PANY, PHILADELPHIA, PA.</b>		
4365	Keystone Ammoniated Superphosphate, --	P. K. Smith, Nescopeck, -----
4412	Keystone Economy Grain Compound, ----	Adolph Boettinger, Danville, -----
3946	Keystone Economy Grain Compound, ----	E. S. Merkel, Hamburg, -----
3262	Keystone Economy Grain Compound, ----	J. A. Seiler, Klingerstown, -----
4410	Keystone Special Pennsylvania Grain Mixture, -----	Adolph Boettinger, Danville, -----
3945	Keystone Special Pennsylvania Grain Mixture, -----	E. S. Merkel, Hamburg, -----
4353	Keystone Special Potato and Tomato Mixture, -----	Lakeside Grange, Mahanoy City, -----
3269	Keystone Special Potato and Tomato Mixture, -----	Charles Schoffstall, Valley View, -----
4411	Keystone Standard Potato Manure Re- vised, -----	Adolph Boettinger, Danville, -----
4839	Keystone Standard Potato Manure Re- vised, -----	George E. Strang, Quakertown, -----
<b>KOLLER FERTILIZER COMPANY, SEITZ-</b> <b>LAND, PA.</b>		
4033	Koller's Two & Ten Phosphate, -----	Loganville Farmers Co-operative Associa- tion, Loganville, -----
<b>THE LANCASTER BONE FERTILIZER</b> <b>COMPANY, LANCASTER, PA.</b>		
3212	Ammoniated Bone Manure, -----	Josiah Flinchbaugh, Windsor, -----
4463	Corn, Grass & Wheat Special, -----	G. Hartman, Berryshurg, -----
4156	National Crop Grower, -----	George W. Bare, New Holland, -----
3519	National Crop Grower, -----	Emanuel Helsel, Bedford, -----
3245	National Crop Grower, -----	W. E. Urlich, Myerstown, -----
3275	Scientific Organic Compound, -----	Ellsworth Erdman, Klingerstown, -----
4815	Scientific Organic Compound, -----	John J. Peters, Claussville, -----
<b>THE LANCASTER CHEMICAL COMPANY,</b> <b>LANCASTER, PA.</b>		
3904	No. 4 Rising Sun, -----	Big Creek Grange, Lebigton, -----
4126	No. 6 Grain Special, -----	S. N. Moore, Echo, -----
4125	No. 11 Keystone Brand, -----	S. N. Moore, Echo, -----
3594	No. 14 Wheat & Grass, -----	Bruhaker & Esbenshade, Middletown, ----
4124	No. 15 General Crop Special, -----	S. N. Moore, Echo, -----
3194	No. 18 Success Brand, -----	Barr. Spangler, Marietta, -----
<b>LEBANON FERTILIZER WORKS, LEBA-</b> <b>NON, PA.</b>		
4446	Levan's Golden King Fertilizer, -----	C. F. Gelbach, Duncannon, -----
3285	Levan's Golden King Fertilizer, -----	W. H. Maurer, Hegins, -----
3646	Levan's Golden King Fertilizer, -----	Amos Nissley, Millersville, -----
4447	Levan's Grain & Grass Fertilizer, -----	C. F. Gelbach, Duncannon, -----
3783	Levan's Grain & Grass Fertilizer, -----	Alfred Litchard, Turbotville, -----
3669	Levan's Grain & Grass Fertilizer, -----	West Willow Farmers Association, Inc., West Willow, -----
<b>LISTERS AGRICULTURAL CHEMICAL</b> <b>WORKS, NEWARK, N. J.</b>		
4711	Listers 2-12-0 Fertilizer, -----	Landis Brackhill, Kinzer, -----
3999	Listers 2-12-0 Fertilizer, -----	William H. Fritz, Berwyn, -----
4018	Listers 2-12-0 Fertilizer, -----	A. M. Grove & Co., Muddy Creek Forks, --

## PHOSPHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS—Continued.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
7.35	1.70	1.60	12.36	11.00	10.65	10.00	1.71	1.00	38 00	4166
6.38	2.37	2.50	12.60	11.00	10.44	10.00	2.16	1.00	50.00	4169
7.73	0.89	0.80	10.94	11.00	*9.77	10.00	1.17	1.00	30 50	3217
5.02	0.96	0.82	13.55	11.00	10.88	10.00	2.67	1.00	29 00	4190
9.30	0.80	0.82	12.13	11.00	11.49	10.00	0.64	1.00	26 50	4601
13.48	1.67	1.65	13.32	13.00	12.63	12.00	0.69	1.00	-----	4695
5.11	2.46	1.65	11.26	11.00	10.37	10.00	0.89	1.00	32 00	4365
6.07	1.08	0.82	11.52	10.00	9.91	9.00	1.61	1.00	28 00	4412
8.19	1.00	0.82	10.88	10.00	9.83	9.00	1.05	1.00	-----	3946
9.13	1.65	0.82	10.14	10.00	8.97	9.00	1.17	1.00	30 00	3262
8.28	1.25	0.82	12.83	13.00	12.50	12.00	0.33	1.00	30 00	4410
10.35	1.50	0.82	13.36	13.00	12.59	12.00	0.77	1.00	-----	3945
6.25	3.49	3.28	10.32	11.00	*9.68	10.00	0.64	1.00	41 00	4353
12.87	3.47	3.28	10.68	11.00	9.94	10.00	0.74	1.00	46 00	3269
3.05	2.73	2.46	11.66	11.00	10.75	10.00	0.91	1.00	41 00	4411
4 25	2.31	2.46	11.94	11.00	11.10	10.00	0.84	1.00	38 50	4839
9.69	1.57	1.65	11.70	10.50	10.09	10.00	1.61	0.50	29 25	4033
7.12	1.03	0.82	12.58	10.00	10.14	9.00	2.44	1.00	28 00	3212
2.38	0.71	0.40	11.24	11.00	10.86	10.00	0.38	1.00	30 00	4463
4.20	0.45	0.40	8.93	9.00	8.29	8.00	0.64	1.00	25 00	4156
5.00	0.50	0.40	8.83	9.00	8.23	8.00	0.60	1.00	22 00	3519
5.59	0.86	0.40	12.67	9.00	10.02	8.00	2.65	1.00	25 00	3245
6.25	1.84	1.20	11.61	10.00	9.06	9.00	2.55	1.00	28 50	3275
5.27	1.38	1.20	11.67	10.00	8.81	9.00	2.86	1.00	30 00	4815
11.50	*1.75	2.47	12.27	13.00	*10.48	12.00	1.79	1.00	38 00	3904
7.00	*0.29	0.41	12.67	11.00	10.50	10.00	2.17	1.00	24 00	4126
8.11	*0.53	0.82	10.09	9.00	8.39	8.00	1.70	1.00	25 00	4125
11.01	0.75	0.82	11.52	11.00	*9.21	10.00	2.31	1.00	26 00	3594
8.42	*1.01	1.65	13.25	13.00	12.08	12.00	1.17	1.00	34 00	4124
11.59	0.87	0.82	10.72	13.00	*8.87	12.00	1.85	1.00	-----	3194
6.89	1.05	0.82	10.73	11.00	10.00	10.00	0.73	1.00	26 50	4446
7.46	1.07	0.82	10.36	11.00	*9.06	10.00	1.30	1.00	24 50	3285
7.23	1.43	0.82	11.11	11.00	*9.54	10.00	1.57	1.00	-----	3646
7.45	1.89	1.65	11.75	11.00	10.28	10.00	1.47	1.00	32 50	4447
7.80	1.67	1.65	11.52	11.00	9.99	10.00	1.53	1.00	29 00	3783
6.95	1.73	1.65	10.93	11.00	*9.65	10.00	1.28	1.00	31 75	3669
8.24	1.59	1.65	13.25	13.00	12.22	12.00	1.03	1.00	34 00	4711
5.36	1.95	1.65	15.26	13.00	12.26	12.00	3.00	1.00	38 50	3999
10.14	1.74	1.65	13.27	13.00	*11.79	12.00	1.48	1.00	35 00	4018

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4022	Listers Celebrated Ground Bone & Tankage Acidulated.	A. M. Grove & Co., Muddy Creek Forks,--
4142	Listers Crescent Ammoniated Superphosphate, 1916.	George Bard, Leacock, -----
4309	Listers Excelsior Guano, 1916, -----	M. R. Brumbaugh & Son, Martinsburg,--
4206	Listers Excelsior Guano, 1916, -----	B. E. & J. T. Cokely, Scranton, -----
3960	Listers Excelsior Guano, 1916, -----	W. E. Ervin, Somerton, -----
3206	Listers Fish Brand Fertilizer, -----	W. L. Mitzel, Red Lion, -----
4109	Listers Fish Brand Fertilizer, -----	J. B. Rohrer, Port Trevorton, -----
3805	Listers Lucky Strike Guano, -----	A. E. Bartges, Millheim, -----
421	Listers Lucky Strike Guano, -----	H. E. Mullen, Christiania, -----
4714	Listers Plant Food, 1916, -----	Landis Brackbill, Kinzer, -----
3445	Listers Llant Food, 1916, -----	M. D. Brandt, Bachmansville, -----
3572	Listers Plant Food, 1916, -----	Martin B. Brandt, Bachmansville, -----
3738	Listers Soil Improver, -----	D. B. Griffith, Wolfsburg, -----
4017	Listers Soil Improver, -----	W. L. Mitzel, Red Lion, -----
4466	Listers Soil Improver, -----	C. G. Shetron, Millersburg, -----
	FREDERICK LUDLAM COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, BALTIMORE, MD.	
4629	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 1, 1916, -----	Claude Davis, Windber, -----
3633	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 1, 1916, -----	Zinn Brothers, York, -----
3634	Ludlam's Cecrops Fertilizer Sickle Fertilizer No. 2, 1916, -----	Zinn Brothers, York, -----
	THE MAPES FORMULA & PERUVIAN GUANO COMPANY, NEW YORK, N. Y.	
4252	Mapes Five Percent Ammonia Special, -----	G. Moyer, Mt. Joy, -----
3340	Mapes General Crop (1916 Brand), -----	Jos. R. Taggart, Norristown, -----
	THE MARTIN FERTILIZER COMPANY, PHILADELPHIA, PA.	
3382	Martin's Ammoniated Phosphate 1-8-0,-----	Richard Scully, Pomeroy, -----
3375	Martin's Ammoniated Phosphate 2-8-0,-----	John W. Root, Kimberton, -----
4359	Martin's Ammoniated Phosphate 2-10-0,-----	John H. Reed, Cressona, -----
3376	Martin's Ammoniated Phosphate 2-10-0,-----	John W. Root, Kimberton, -----
3623	Martin's Crop Producer, -----	Cook Grain, Feed & Supply Co., Dillsburg, -----
4016	Martin's Crop Producer, -----	Arbuckle Gordon Co., Fort Washington,--
3668	Martin's Dissolved Animal Matter, -----	West Willow Farmers Association, Inc., West Willow, -----
	THE MILLER FERTILIZER COMPANY, BALTIMORE, MD.	
3604	Farmers Profit, -----	Brillinger & Swartz, Emigsville, -----
4278	Farmers Profit, -----	Miller T. Harkins, Hickory Hill, -----
3462	Farmers Profit, -----	W. H. Siegfried, Kempton, -----
4436	M. B. S., -----	B. R. Summer & Co., Waynesboro, -----
4434	Miller's No. 2 Special, -----	B. R. Summer & Co., Waynesboro, -----
	NASSAU FERTILIZER COMPANY, NEW YORK, N. Y.	
4475	Common Sense Fertilizer, 1916, -----	B. J. Crisman, Factoryville, -----
4768	Common Sense Fertilizer, 1916, -----	E. L. Jones, Fairdale, -----
4829	Common Sense Fertilizer, 1916, -----	John H. Landis, Quakertown, -----
3589	Old Hickory, 1916, -----	William Mumma, Mechanicsburg, -----
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
3080	N. A. C. Brand Lawngro, -----	The I. W. Scott Co., Pittsburgh, -----



## PHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS—Continued.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
4.27	2.88	2.67	12.13	12.00	-----	-----	-----	-----	45 00	4022
8.53	1.63	1.65	11.00	11.00	*9.60	10.00	1.40	1.00	36 00	4142
5.42	2.43	2.47	11.14	11.00	10.54	10.00	0.60	1.00	43 00	4309
11.37	2.52	2.47	13.27	11.00	10.82	10.00	2.45	1.00	55 00	4206
10.57	2.60	2.47	13.14	11.00	10.40	10.00	2.74	1.00	43 00	3960
9.67	1.66	1.23	11.37	11.00	10.13	10.00	1.24	1.00	30 50	3206
7.69	1.34	1.23	10.24	11.00	*9.41	10.00	0.83	1.00	31 35	4109
7.79	1.82	1.65	9.53	9.00	8.41	8.00	1.12	1.00	31 75	3805
5.89	1.52	1.65	9.49	9.00	8.81	8.00	0.68	1.00	33 00	4271
4.67	1.00	0.82	12.63	11.00	11.53	10.00	1.10	1.00	27 00	4714
9.17	1.05	0.82	11.35	11.00	10.44	10.00	0.91	1.00	-----	3445
8.92	0.99	0.82	11.44	11.00	10.34	10.00	1.10	1.00	26 00	3572
9.10	1.06	0.82	9.18	9.00	8.33	8.00	0.85	1.00	25 00	3738
6.50	0.99	0.82	9.48	9.00	8.38	8.00	1.10	1.00	24 50	4017
6.79	0.85	0.82	9.40	9.00	8.79	8.00	0.61	1.00	29 00	4466
5.57	1.00	0.82	11.88	11.00	10.92	10.00	0.96	1.00	30 00	4629
9.14	0.89	0.82	11.25	11.00	9.97	10.00	1.28	1.00	26 00	3633
10.00	1.76	1.65	11.61	11.00	10.32	10.00	1.29	1.00	-----	3634
9.71	*3.48	4.12	12.31	10.00	9.26	8.00	3.05	2.00	52 00	4252
8.18	1.75	1.65	11.42	10.00	*5.97	8.00	5.45	2.00	38 00	3340
12.46	1.28	0.82	10.31	9.00	8.59	8.00	1.72	1.00	26 25	3382
9.47	1.96	1.65	10.06	9.00	8.38	8.00	1.68	1.00	35 00	3375
11.53	*1.45	1.65	14.06	11.00	11.85	10.00	2.21	1.00	-----	4359
10.23	1.78	1.65	12.72	11.00	10.27	10.00	2.45	1.00	38 00	3376
7.76	1.07	1.03	13.79	11.00	11.44	10.00	2.35	1.00	28 50	3623
12.33	1.40	1.03	11.99	11.00	10.56	10.00	1.43	1.00	34 00	4016
12.80	2.03	1.65	12.19	-----	*10.35	12.00	1.84	-----	35 00	3668
4.54	1.38	1.44	10.64	9.50	9.21	9.00	1.43	0.50	31 00	3604
2.47	1.43	1.44	10.54	9.50	9.70	9.00	0.84	0.50	35 00	4278
5.78	1.84	1.44	9.62	9.50	*8.18	9.00	1.44	0.50	30 00	3462
1.79	0.62	0.62	8.92	7.50	7.64	7.00	1.28	0.50	24 10	4436
1.66	0.88	1.03	9.44	8.50	*7.65	8.00	1.79	0.50	28.60	4434
6.63	1.78	1.65	12.31	11.00	10.80	10.00	1.51	1.00	35 00	4475
8.38	1.59	1.65	12.93	11.00	10.37	10.00	2.56	1.00	32 25	4767
8.19	*1.44	1.65	11.93	11.00	10.85	10.00	1.08	1.00	36 00	4829
7.17	1.03	0.82	11.89	11.00	10.72	10.00	1.17	1.00	26 50	3589
7.52	3.32	3.29	15.49	16.00	9.56	8.00	5.93	8.00	110 00	3680

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
<b>G. OBER &amp; SONS COMPANY, BALTIMORE, MD.</b>		
3185	Ober's Electro Compound, -----	F. D. Blocher, Gettysburg, -----
3713	Ober's Electro Compound, -----	W. E. Manifold, Fawn Grove, -----
4533	Ober's Electro Compound, -----	N. B. Shober, Garret, -----
3811	Ober's Liberty Fish Guano, -----	C. C. Cathman, Hartleton, -----
3653	Ober's Liberty Fish Guano, -----	Willis C. Herr, Strausburg, -----
3362	Ober's Liberty Fish Guano, -----	Munholland & Dale, Mortonville, -----
<b>PATAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, BALTIMORE, MD.</b>		
4876	Farmers Delight, -----	Ackermanville Milling Co., Ackermanville, -----
4451	Patapasco 1-8-0 Fertilizer, -----	Charles S. Brunner, New Bloomfield, -----
3200	Patapasco 1-8-0 Fertilizer, -----	M. F. Waser, York, -----
4558	Patapasco Ammoniated Compound, -----	Denny & Allison, Hickory, -----
4676	Patapasco Ammoniated Compound, -----	W. L. Milliken, Honey Grove, -----
3583	Patapasco Ammoniated Compound, -----	Mock & Hartman, Harrisburg, -----
3767	Patapasco Fish Mixture, -----	William E. Boyer, Mooresburg, -----
3702	Patapasco Fish Mixture, -----	J. P. Schuchart, New Freedom, -----
3201	Patapasco Fish Mixture, -----	M. F. Waser, York, -----
3613	Patapasco Golden Crop Fertilizer, 1916, -----	Williams Brothers, Dillsburg, -----
4874	Patapasco Hay Maker, -----	George Iitterly, Wind Gap, -----
3192	Patapasco Truckers Delight, -----	H. P. Kocher, Wrightsville, -----
3582	Patapasco Truckers Delight, -----	Mock & Hartman, Harrisburg, -----
<b>PIEDMONT MT. AIRY GUANO COMPANY, BALTIMORE, MD.</b>		
3828	Levering's Standard, -----	Hershey Leaman & Co., Lititz, -----
4454	Levering's Standard, -----	B. F. Horting, Newport, -----
3567	Levering's Standard, -----	Miles Wrigley, Mahaffey, -----
4245	Piedmont Blue Ribbon Fertilizer, -----	W. D. Glick, Millersville, -----
3550	Piedmont Blue Ribbon Fertilizer, -----	H. L. Orr & Co., Tyrone, -----
4191	Piedmont Special Crop Grower, -----	J. R. Hanks, Springboro, -----
4064	Piedmont Special Crop Grower, -----	John G. Simpson, Huntingdon, -----
3568	Piedmont Special Crop Grower, -----	Miles Wrigley, Mahaffey, -----
3183	Piedmont Utility Fertilizer, -----	H. D. & J. F. Bream, Gettysburg, -----
4592	Piedmont Utility Fertilizer, -----	James Maust, Elk Lick, -----
4880	Piedmont Utility Fertilizer, -----	Amandes W. Watring, Schnecksville, -----
<b>PITTSBURGH PROVISION &amp; PACKING COMPANY, PITTSBURGH, PA.</b>		
4556	Guano Fertilizer, -----	W. H. Dunlap, Jr., Canonsburg, -----
3324	Guano Fertilizer, -----	W. J. Gilson, Titusville, -----
<b>THE POLLOCK FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.</b>		
3380	Ammoniated Fertilizer A, -----	Richard Scully, Pomeroy, -----
4612	Ammoniated Fertilizer AA, -----	Webster Barron, Friedens, -----
3801	Ammoniated Fertilizer AA, -----	E. C. Ross, Lemont, -----
4421	Grain Special, -----	Jacob Garman, Shippensburg, -----
4595	Our Brand Guano, -----	A. O. Beal, Sand Patch, -----
3383	Our Brand Guano, -----	Richard Scully, Pomeroy, -----
3169	Our Brand Guano, -----	J. W. Shoemaker, Littlestown, -----
3508	War Brand, -----	John L. Bortz, Bedford, -----
4423	War Brand, -----	Jacob Garman, Shippensburg, -----
4056	War Brand, -----	R. N. McCarl & Son, Mapleton Depot, -----
<b>RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.</b>		
4406	Rasin's Potato & Vegetable Fertilizer, -----	H. B. Law & Son, Orangeville, -----
3850	Rasin's Potato & Vegetable Fertilizer, -----	Leonard Ritter, St. Marys, -----
4337	Rasin's Royal Superphosphate, -----	S. K. Donker, Myerstown, -----
4167	Rasin's Royal Superphosphate, -----	A. D. Kramer, Kreamer, -----
3695	Rasin's Royal Superphosphate, -----	A. G. Taylor, Glenville, -----

## PHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS.—Continued.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
9.63	1.08	0.82	11.35	11.00	10.23	10.00	1.12	1.00	28.00	3185
11.05	0.95	0.82	11.14	11.00	10.15	10.00	0.99	1.00	26 50	3713
9.42	0.95	0.82	12.27	11.00	10.99	10.00	1.23	1.00	27 00	4583
12.30	1.28	1.03	14.11	14.00	13.31	13.00	0.80	1.00	31 80	3811
10.76	1.18	1.03	14.09	14.00	13.07	13.00	1.02	1.00	37 00	3653
12.13	1.20	1.03	14.66	14.00	13.46	13.00	1.20	1.00	30 00	3362
6.55	0.81	0.82	10.10	9.00	8.56	8.00	1.54	1.00	27 00	4876
6.60	0.89	0.82	9.57	9.00	8.60	8.00	0.97	1.00	26 00	4451
9.45	1.28	0.82	9.54	9.00	8.77	8.00	0.77	1.00	28 00	3200
6.40	0.79	0.82	10.80	11.00	10.09	10.00	0.71	1.00	33 00	4558
7.24	0.88	0.82	11.37	11.00	10.46	10.00	0.91	1.00	27 00	4676
6.77	1.20	0.82	11.77	11.00	10.76	10.00	1.01	1.00	26 00	3583
7.32	1.83	1.65	10.94	9.00	9.88	8.00	1.06	1.00	31 75	3767
8.70	1.50	1.65	9.04	9.00	7.94	8.00	1.10	1.00	31 00	3702
8.70	1.93	1.65	10.80	9.00	9.65	8.00	1.15	1.00	32 50	3201
10.38	1.65	1.65	11.02	11.00	9.87	10.00	1.15	1.00	33 00	3613
8.24	5.66	5.76	8.44	7.00	6.63	6.00	1.81	1.00	61 00	4874
6.10	3.10	2.47	11.48	11.00	10.40	10.00	1.08	1.00	38 75	3192
5.93	2.69	2.47	11.48	11.00	10.27	10.00	1.21	1.00	40 00	3582
4.51	2.05	1.65	10.12	9.00	*7.15	8.00	2.97	1.00	40 00	3828
5.03	1.67	1.65	10.22	9.00	9.31	8.00	0.91	1.00	30 25	4454
3.20	2.13	1.65	8.48	9.00	*7.42	8.00	1.06	1.00	36 00	3567
7.36	*2.23	2.47	11.80	11.00	10.87	10.00	0.93	1.00	42 00	4245
8.00	2.51	2.47	11.24	11.00	*9.75	10.00	1.49	1.00	40 00	3550
5.11	1.00	0.82	10.69	11.00	9.99	10.00	0.70	1.00	27 55	4191
5.23	1.06	0.82	12.22	11.00	11.01	10.00	1.21	1.00	29 75	4064
4.81	0.93	0.82	11.62	11.00	10.01	10.00	1.61	1.00	32 00	3568
7.90	1.83	1.65	11.25	11.00	10.19	10.00	1.06	1.00	33 50	3183
7.84	*1.33	1.65	12.07	11.00	11.39	10.00	0.68	1.00	34 00	4592
7.25	*1.45	1.65	12.65	11.00	11.29	10.00	1.36	1.00	32 00	4880
3.06	1.61	1.43	12.11	11.00	*8.51	9.00	3.60	2.00	33 00	4556
5.00	1.81	1.43	12.09	11.00	9.18	9.00	2.91	2.00	32 00	3324
9.21	0.99	0.82	11.11	11.00	10.28	10.00	0.83	1.00	27 75	3380
6.84	1.66	1.65	11.51	11.00	10.96	10.00	0.55	1.00	33 00	4612
9.31	1.75	1.65	11.43	11.00	10.09	10.00	1.34	1.00	38 01	3801
2.59	1.55	1.65	9.98	9.00	8.55	8.00	1.43	1.00	32 30	4421
8.42	0.85	0.82	10.91	9.00	10.27	8.00	0.64	1.00	31 00	4595
7.56	1.18	0.82	9.40	9.00	8.56	8.00	0.84	1.00	26 25	3383
8.24	1.13	0.82	9.26	9.00	8.20	8.00	1.06	1.00	24 50	3169
8.38	0.61	0.41	9.34	9.00	8.54	8.00	0.80	1.00	24 00	3508
1.83	0.63	0.41	9.43	9.00	8.59	8.00	0.84	1.00	22 80	4423
2.50	0.67	0.41	9.39	9.00	8.22	8.00	1.17	1.00	22 50	4056
1.88	3.11	3.29	9.44	9.00	8.66	8.00	0.78	1.00	43 50	4406
7.89	3.41	3.29	8.92	9.00	8.26	8.00	0.66	1.00	48 00	3850
6.72	0.55	0.41	14.14	9.00	9.22	8.00	4.92	1.00	25 00	4337
5.89	0.62	0.41	15.31	9.00	8.94	8.00	6.37	1.00	23 75	4107
9.47	0.86	0.41	10.83	9.00	9.63	8.00	1.20	1.00	-----	3695

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3384	Rasin's Special Fish Mixture, -----	E. H. Keen & Co., Parkesburg, -----
4409	Rasin's Special Fish Mixture, -----	H. B. Low & Son, Orangeville, -----
4389	Rasin's Special Fish Mixture, -----	E. C. Thomas, Gettysburg, -----
3923	Rasin's Special Fish & Bone Guano, -----	A. F. Kimmel, Orwigsburg, -----
4408	Rasin's Special Fish & Bone Guano, -----	H. B. Low & Son, Orangeville, -----
4095	Rasin's Special Fish & Bone Guano, -----	S. B. Miller, Mifflinburg, -----
READING BONE FERTILIZER COMPANY, READING PA.		
3973	Animal Tankage Mixture, -----	S. Carl Garner, Hatboro, -----
3954	Animal Tankage Mixture, -----	J. D. Moyer, Eshbach, -----
4459	Animal Tankage Mixture, -----	W. H. Sweigard, Halifax, -----
3815	Dissolved Animal Matter, -----	W. W. Cawley, Lewisburg, -----
3676	Dissolved Animal Matter, -----	Krause & Freehling, Marwood, -----
3880	Dissolved Animal Matter, -----	Thomas Worman's Estate, Bath, -----
3908	High Grade Truck Food, -----	J. H. Driesbach, Lehighton, -----
3456	High Grade Truck Food, -----	J. L. Hill, Robesonia, -----
3237	Reading All Crop Special, -----	A. M. Brandt, Palmyra, -----
4543	Reading All Crop Special, -----	Joseph L. Dague, West Brownsville, -----
3529	Reading All Crop Special, -----	John Hamm, Weatherly, -----
4086	Reading Special Potato & Tobacco Ma- nure, -----	W. W. Cawley, Lewisburg, -----
3907	Reading Special Potato & Tobacco Ma- nure, -----	J. H. Dreisbach, Lehighton, -----
3366	Reading Special Potato & Tobacco Ma- nure, -----	W. W. Moses, Exton, -----
3675	Schuykill Valley Favorite, -----	Krause & Freehling, Marwood, -----
3365	Schuykill Valley Favorite, -----	W. W. Moses, Exton, -----
3876	Schuykill Valley Favorite, -----	Thomas Worman's Estate, Bath, -----
4482	Truck, Fruit Tree, Vine, Potato and To- bacco Grower, -----	E. J. Peet, Dalton, -----
READING CHEMICAL COMPANY, READ- ING, PA.		
3272	Early Truck, Tobacco & Potato, -----	Samuel Buffington, Sacramento, -----
4052	Early Truck, Tobacco & Potato, -----	J. L. Engcart, Sbirleysburg, -----
3273	Farmers Favorite, -----	Samuel Buffington, Sacramento, -----
3943	Farmers Favorite, -----	J. P. Fisher, Douglassville, -----
4177	Farmers Favorite, -----	H. L. McCloskey, Beech Creek, -----
3917	Farmers Meat Mixture, -----	R. S. Kemmerer, Andreas, -----
3264	Pennant Winner, -----	Samuel Buffington, Sacramento, -----
3916	Reading Big Crop Special, -----	R. S. Kemmerer, Andreas, -----
4753	Reading Big Crop Special, -----	N. J. Norton, New Albany, -----
3293	Reading Grain Special, -----	James Myers' Sons, Hughesville, -----
4754	Reading Grain Special, -----	N. J. Norton, New Albany, -----
3921	Reading Grain Special, -----	A. L. Palsgrove, Friedensburg, -----
4404	Royal Fish Guano, -----	W. W. Parker, Rohersburg, -----
4361	Royal Fish Guano, -----	E. W. Whispell, Dallas, -----
ROBERT A. REICHARD, ALLENTOWN, PA.		
3537	Ideal Truck Phosphate, -----	J. B. Adams, Weatherly, -----
3899	Ideal Truck Phosphate, -----	W. T. Huber, Bethlehem, -----
3829	Ideal Truck Phosphate, -----	L. K. Ziegler, Lititz, -----
4873	Lehigh Special Phosphate, -----	J. P. Kunsman, Hellertown, -----
3834	Lehigh Special Phosphate, -----	L. K. Ziegler, Lititz, -----
3882	Universal Phosphate, -----	J. W. Bartholomew, Bath, -----
3886	Universal Phosphate, -----	James E. Knerr, Northampton, -----
3830	Universal Phosphate, -----	L. H. Ziegler, Lititz, -----
F. S. ROYSTER GUANO COMPANY, BAL- TIMORE, MD.		
4224	Royster's C. B. Fish Mixture, -----	C. H. H. Bauman, Scranton, -----
4574	Royster's C. B. Fish Mixture, -----	Jos. G. Cover, Masontown, -----
3256	Royster's C. B. Fish Mixture, -----	S. A. Phillippy, Myerstown, -----
3367	Royster's Corn and Oats Fertilizer, -----	Latshaw Brothers, Anselma, -----



## PHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found	Guaranteed	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
5.77	1.03	0.82	11.42	11.00	*9.71	10.00	1.71	1.00	28 00	3384
4.90	0.86	0.82	12.55	11.00	11.48	10.00	1.07	1.00	26 50	4409
5.73	0.85	0.82	12.11	11.00	11.14	10.00	0.97	1.00	27 00	4389
7.75	1.49	1.65	13.23	12.00	11.67	11.00	1.56	1.00	35 00	3923
6.12	1.58	1.65	13.34	12.00	10.92	11.00	2.42	1.00	33 75	4408
8.03	1.78	1.65	13.04	12.00	11.06	11.00	1.98	1.00	32 00	4095
6.73	1.91	1.64	15.13	15.00	*13.15	14.00	1.98	1.00	44 00	3973
4.02	2.18	1.64	15.40	15.00	*13.32	14.00	2.08	1.00	40 00	3954
7.17	1.88	1.64	16.48	15.00	14.54	14.00	1.94	1.00	40 00	4459
8.36	1.10	0.82	11.48	11.00	10.63	10.00	0.85	1.00	27 25	3815
7.96	1.13	0.82	11.48	11.00	*9.75	10.00	1.73	1.00	31 00	3676
7.93	0.95	0.82	12.17	11.00	11.42	10.00	0.75	1.00	32 00	3880
4.06	3.80	3.29	14.45	13.00	12.17	12.00	2.28	1.00	49 00	3908
6.73	3.91	3.29	14.41	13.00	12.50	12.00	1.91	1.00	-----	3456
7.91	2.22	1.64	11.99	11.00	10.77	10.00	1.22	1.00	-----	3237
3.70	1.98	1.64	12.48	11.00	11.00	10.00	1.38	1.00	35 00	4543
5.32	1.93	1.64	12.72	11.00	10.95	10.00	1.77	1.00	-----	3529
7.33	0.96	0.82	12.64	13.00	*11.49	12.00	1.15	1.00	29 00	4086
9.04	1.13	0.82	13.36	13.00	12.08	12.00	1.28	1.00	29 00	3907
8.86	1.36	0.82	13.33	13.00	11.81	12.00	1.52	1.00	34 00	3366
3.09	0.79	0.41	7.46	8.00	7.01	7.00	0.45	1.00	25 00	3675
4.75	0.82	0.41	8.00	8.00	7.74	7.00	0.26	1.00	26 00	3365
6.27	0.65	0.41	8.98	8.00	8.79	7.00	0.19	1.00	26 00	3879
2.55	3.69	3.29	8.90	9.00	8.15	8.00	0.75	1.00	30 00	4482
8.53	3.28	3.28	11.11	11.00	*9.69	10.00	1.42	1.00	46 00	3272
8.61	*2.63	3.28	12.25	11.00	10.49	10.00	1.76	1.00	38 00	4052
6.89	0.99	0.82	11.57	11.00	10.88	10.00	0.69	1.00	29 00	3273
3.33	0.89	0.82	11.47	11.00	10.28	10.00	1.19	1.00	31 00	3943
5.20	0.89	0.82	12.73	11.00	11.01	10.00	1.72	1.00	23 00	4177
2.27	1.08	0.82	8.93	9.00	*7.68	8.00	1.25	1.00	29 00	3917
8.33	2.84	2.46	11.05	11.00	10.08	10.00	0.97	1.00	-----	3264
6.60	1.82	1.64	9.04	9.00	*7.53	8.00	1.51	1.00	34 00	3916
4.33	1.85	1.64	8.29	9.00	*7.61	8.00	0.68	1.00	35 00	4753
6.50	0.60	0.41	9.43	8.00	8.78	7.00	0.65	1.00	24 00	3293
4.85	0.56	0.41	7.81	8.00	7.64	7.00	0.17	1.00	24 00	4754
2.88	0.44	0.41	7.73	8.00	7.46	7.00	0.27	1.00	25 00	3921
6.16	1.25	1.02	14.30	13.00	12.27	12.00	2.63	1.00	32 50	4404
9.03	1.08	1.02	13.29	13.00	12.28	12.00	1.01	1.00	35 00	4361
9.82	*2.94	3.28	12.04	11.00	10.71	10.00	1.33	1.00	38 00	3537
9.62	*2.88	3.28	11.26	11.00	10.06	10.00	1.20	1.00	47 00	3899
9.00	*2.98	3.28	11.44	11.00	10.41	10.00	1.03	1.00	45 00	3829
8.53	*1.44	1.64	12.58	13.00	12.41	12.00	0.17	1.00	36 00	4873
9.43	1.74	1.64	13.15	13.00	12.93	12.00	0.22	1.00	33 75	3834
7.73	1.38	0.82	9.45	11.00	*8.80	10.00	0.65	1.00	24 50	3882
8.08	0.95	0.82	10.79	11.00	*9.72	10.00	1.07	1.00	27 00	3886
6.93	0.91	0.82	10.24	11.00	10.01	10.00	0.23	1.00	25 50	3830
2.51	1.65	1.65	9.38	8.50	7.93	8.00	1.45	0.50	38 75	4224
4.28	1.94	1.65	8.99	8.50	7.82	8.00	1.17	0.50	36 00	4574
4.26	1.65	1.65	8.92	8.50	*7.59	8.00	1.33	0.50	31 50	3250
5.80	1.44	0.82	8.74	8.50	*7.71	8.00	1.03	0.50	25.00	3367

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3407	Royster's Corn and Oats Fertilizer, -----	J. S. Waite & Co., Bellefonte, -----
4692	Royster's Corn and Oats Fertilizer, -----	C. W. Walton Hardware Co., Beaver, -----
4384	Royster's Curfew Ammoniated Superphosphate, -----	James Lucas, Valley View, -----
3936	Royster's Curfew Ammoniated Superphosphate, -----	H. S. Zook, Elverson, -----
3417	Royster's Flamingo Ammoniated Superphosphate, -----	J. S. Dale, State College, -----
4270	Royster's Flamingo Ammoniated Superphosphate, -----	H. E. Mullen, Christiania, -----
3431	Royster's Innovation Ammoniated Superphosphate, -----	Eulalia Mills, Coudersport, -----
3251	Royster's Innovation Ammoniated Superphosphate, -----	S. A. Phillippy, Myerstown, -----
3227	Royster's Innovation Ammoniated Superphosphate, -----	Reynoldsville Hardware Co., Reynoldsville, -----
3320	Royster's Royal Blue Ammoniated Superphosphate, -----	Frank P. Allen, Titusville, -----
3902	Royster's Royal Blue Ammoniated Superphosphate, -----	W. A. Buck, Aquashicola, -----
4283	Royster's Royal Blue Ammoniated Superphosphate, -----	Wm. H. Walker, Kennett Square, -----
4093	Royster's Special Wheat Grower, -----	John Strickler, Mifflinburg, -----
	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.	
4690	Ammoniated Superphosphate No. 1, -----	J. W. Denny, Beaver Falls, -----
3198	Ammoniated Superphosphate No. 1, -----	Hellam Farmers Co-operative Association, Hellam, -----
3199	Ammoniated Superphosphate X, -----	Hellam Farmers Co-operative Association, Hellam, -----
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.	
4281	Scott's Ammoniated Base, -----	Edward Rupert, Oxford, -----
3938	Scott's Ammoniated Superphosphate, -----	Levi Beller, Elverson, -----
4723	Scott's Special Grain Grower, -----	Fred Cross, Adamstown, -----
4154	Scott's Special Grain Grower, -----	A. B. Groff, New Holland, -----
4280	Scott's Special Grain Grower, -----	Edward Rupert, Oxford, -----
	M. L. SHOEMAKER & COMPANY, INC., PHILADELPHIA, PA.	
3957	Swift's Sure Guano for Tomatoes, Truck and Corn, -----	W. E. Erwin, Somerton, -----
3343	Swift's Sure Phosphate for Tobacco and General Use, -----	Jos. R. Taggart, Norristown, -----
	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD.	
3903	Gold Coin, -----	W. A. Buck, Aquashicola, -----
3875	Gold Coin, -----	Wm. D. Kunkel, Bath, -----
3894	Gold Coin, -----	A. H. Remaley, Easton, -----
	SWIFT & COMPANY, BALTIMORE, MD.	
4426	Swift's Ammoniated Phosphate, -----	Diehl, Omwake & Diehl, Chambersburg, -----
4445	Swift's Ammoniated Phosphate, -----	C. F. Gelbach, Duncannon, -----
3467	Swift's Cereal Fertilizer, -----	William H. Siegfried, Kempton, -----
4121	Swift's Diamond "C" Grain Fertilizer, -----	James McCullough & Son, Kittanning, -----
4171	Swift's Schuylkill Valley Favorite, 2-7-0, -----	R. E. Mase, Liberty, -----
4788	Swift's Special Corn Grower, -----	I. W. Bunnell, Pleasant Mt., -----
4286	Swift's Special Corn Grower, -----	Lippincott & Eadie, Bryn Mawr, -----
4240	Swift's Special Corn Grower, -----	M. C. Stewart, Indiana, -----
4242	Swift's Special Harrison Formula, -----	M. C. Stewart, Indiana, -----

## PHOSPHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FERTILIZERS—Continued.											
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.	
	Found.	Guaranteed.	Total.		Available.		Insoluble.				
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.			
%	%	%	%	%	%	%	%	%	\$		
6.19	1.61	0.82	11.23	8.50	10.34	8.00	0.89	0.50	25.50	3407	
2.71	1.05	0.82	9.30	8.50	*7.40	8.00	1.90	0.50	31 50	4692	
3.19	*2.58	3.29	10.17	8.50	9.33	8.00	0.84	0.50	45 00	4384	
4.02	3.14	3.29	10.19	8.50	8.75	8.00	1.44	0.50	44 00	3936	
7.00	2.27	2.06	10.51	12.50	*9.34	12.00	1.17	0.50	39 60	3417	
4.01	2.34	2.06	14.01	12.50	13.04	12.00	0.97	0.50	40 00	4270	
4.27	2.68	2.47	9.53	8.50	8.14	8.00	1.39	0.50	38 50	3431	
5.63	2.67	2.47	8.92	8.50	*7.50	8.00	1.42	0.50	36 50	3251	
4.45	2.80	2.47	12.19	8.50	10.70	8.00	1.49	0.50	45 00	3227	
5.51	1.39	0.82	11.17	10.50	10.00	10.00	1.17	0.50	31 00	3320	
4.65	1.28	0.82	10.96	10.50	*9.75	10.00	1.21	0.50	28 00	3902	
5.57	0.88	0.82	11.99	10.50	10.60	10.00	1.39	0.50	26 50	4283	
7.90	1.55	0.82	13.98	12.50	12.67	12.00	1.31	0.50	27 50	4093	
5.15	0.82	0.82	11.33	11.00	10.17	10.00	1.16	1.00	30 00	4690	
11.19	1.72	1.65	11.57	11.00	10.53	10.00	0.94	1.00	-----	3198	
8.02	1.23	0.82	8.94	9.00	8.02	8.00	0.92	1.00	-----	3199	
8.59	1.52	1.65	14.61	14.00	13.70	12.00	0.91	2.00	36 00	4281	
11.89	2.76	3.30	12.76	12.00	11.10	10.00	1.66	2.00	-----	3938	
3.93	0.86	0.82	13.14	12.00	11.61	10.00	1.53	2.00	27 00	4723	
5.49	1.33	0.82	12.59	12.00	11.44	10.00	1.15	2.00	27 00	4154	
8.45	0.78	0.82	12.78	12.00	11.72	10.00	1.06	2.00	28 00	4280	
6.87	2.29	1.65	13.43	10.00	9.25	8.00	4.18	2.00	39 00	3957	
7.15	3.56	3.30	13.33	11.00	10.20	9.00	3.13	2.00	50 00	3343	
4.08	0.82	0.82	11.76	9.00	9.71	8.00	2.05	1.00	26 00	3903	
7.87	0.97	0.82	10.08	9.00	8.31	8.00	1.77	1.00	25 75	3875	
8.75	0.98	0.82	10.10	9.00	9.09	8.00	1.01	1.00	24 00	3894	
3.70	0.92	0.82	10.78	10.00	*9.30	10.00	1.48	-----	27 00	4426	
2.08	1.55	0.82	7.61	10.00	*7.20	10.00	0.41	-----	26 50	4445	
3.50	1.18	0.82	8.36	9.00	*7.45	9.00	0.91	-----	-----	3467	
6.02	1.38	0.82	12.13	8.00	10.69	8.00	1.44	-----	30 00	4121	
1.60	0.59	0.41	7.44	7.00	6.88	7.00	0.56	-----	23 50	4171	
4.62	1.48	1.65	12.81	10.00	10.30	10.00	2.51	-----	34 25	4788	
8.45	*1.38	1.65	13.52	10.00	11.30	10.00	2.22	-----	42 00	4286	
6.60	1.57	1.65	12.85	10.00	11.09	10.00	1.76	-----	35 50	4240	
5.11	3.22	3.29	11.34	10.00	10.09	10.00	1.25	-----	48 00	4242	

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
4244	Swift's Top Dresser Formula No. 1, ----	M. C. Stewart, Indiana, -----
3758	Swift's Wheat & Rye Grower, -----	Horn & Develing, Galeton, -----
4794	Swift's Wheat & Rye Grower, -----	H. J. Van Vliet, East Stroudsburg, -----
	TAYLOR PROVISION COMPANY, TRENTON, N. J.	
3969	John Taylor's Standard Grain Grower Revised,	Arthur Hill, Willow Grove, -----
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
4704	Farmers Choice Fertilizer, -----	E. J. Leaman, Ronks, -----
3361	Farmers Choice Fertilizer, -----	Munholland & Dale, Mortonville, -----
4869	Long Island Special 4-10-0, -----	T. O. Bachman, Hellertown, -----
4294	Long Island Special 4-10-0, -----	James K. Lewis, Honeybrook, -----
4868	Thomas Wheat and Corn Guano, -----	T. O. Bachman, Hellertown, -----
4108	Thomas Wheat and Corn Guano, -----	A. W. Valentine, Mt. Pleasant Mills, -----
	JACOB TRINLEY & SONS, LINFIELD, PA.	
4004	Favorite Phosphate, -----	Mowrey-Latshaw Hardware Co., Spring City, -----
	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA.	
3352	Grain Manure, -----	Edw. W. Brinton & Sons, West Chester, --
4821	Grain Manure, -----	W. M. Gehman, Macungie, -----
4342	Grain Manure, -----	C. W. Mohler, Richland, -----
3345	1918 Fish Manure, -----	M. C. Michener, Media, -----
4285	1918 Fish Manure, -----	John C. Rhoades Estate, Newton Square, --
3344	1918 No. 2 Potato and Truck Manure, --	M. C. Michener, Media, -----
4809	1918 Potato and Vegetable Manure, --	H. E. Mantz, Saegerville, -----
3347	1918 Potato and Vegetable Manure, --	M. C. Michener, Media, -----
4343	1918 Potato and Vegetable Manure, --	C. W. Mohler, Richland, -----
3348	1918 Raw and Acidulated Animal Compound,	M. C. Michener, Media, -----
	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
3622	Ammoniated Fertilizer A, -----	Cook Grain, Feed & Supply Co., Dillsburg, --
4848	Ammoniated Fertilizer A, -----	Edwin F. Stover, Blooming Glen, -----
4770	Ammoniated Fertilizer A, -----	John Struppler, Montrose, -----
3710	Ammoniated Fertilizer A. A., -----	Anderson Brothers, New Park, -----
4513	Ammoniated Fertilizer A. A., -----	E. M. Curtis, Ariel, -----
3967	Ammoniated Fertilizer A. A., -----	Mullin Brothers, Bustleton, -----
3968	Ammoniated Fertilizer A. A., -----	Mullin Brothers, Bustleton, -----
3966	Great Advancer Phosphate, 1916, -----	Mullin Brothers, Bustleton, -----
4882	Pawnee Phosphate, -----	C. P. Aswald, Slattington, -----
4846	Pawnee Phosphate, -----	Edwin F. Stover, Blooming Glen, -----
4771	Pawnee Phosphate, -----	John Struppler, Montrose, -----
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.	
4013	One-Eight Mixture, -----	Charles Wegscheider, Line Lexington, ----
	VIRGINIA CAROLINA CHEMICAL CO. OF DELAWARE, BALTIMORE, MD.	
4877	Special Crop Formula, -----	E. J. Houck, Bangor, -----
	WASHINGTON, ALEXANDER & COOKE CO., CHARLES TOWN, W. VA.	
4391	W. A. & C.'s Clover Leaf Special, -----	E. S. Kelly, Gettysburg, -----
4390	W. A. & C.'s Farmers Friend, -----	E. S. Kelly, Gettysburg, -----
3184	W. A. & C.'s Regular Corn Mixture, --	E. S. Kelly, Gettysburg, -----



## PHOSPHORIC ACID FERTILIZERS—Continued.

PHOSPHORIC ACID FOR FERTILIZERS - Continued.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
7.75	*5.39	5.76	8.42	8.00	*7.23	8.00	1.19	-----	-----	4244
6.51	1.84	1.65	7.72	8.00	*7.44	8.00	0.28	-----	36 00	3758
3.29	1.74	1.65	10.18	8.00	9.98	8.00	0.20	-----	30 25	4794
7.88	1.22	0.82	10.50	10.00	9.39	9.00	1.11	1.00	37 00	3969
8.87	2.56	2.45	12.05	10.50	10.49	10.00	1.56	0.50	40 75	4704
13.14	2.50	2.45	12.45	10.50	10.93	10.00	1.52	0.50	40 00	3361
9.17	3.13	3.25	10.36	10.50	*9.14	10.00	1.22	0.50	48 00	4869
12.16	3.21	3.25	12.64	10.50	12.17	10.00	0.47	0.50	46 00	4294
3.87	2.00	1.65	11.88	10.50	10.55	10.00	1.33	0.50	35 00	4868
5.43	1.75	1.65	12.07	10.50	9.91	10.00	2.16	0.50	-----	4108
11.82	1.69	1.65	11.29	11.00	10.65	10.00	0.64	1.00	36 00	4004
10.12	1.30	0.82	13.20	13.00	12.24	12.00	0.96	1.00	33 00	3352
9.26	1.05	0.82	13.36	13.00	12.72	12.00	0.64	1.00	29 00	4821
11.51	1.00	0.82	12.12	13.00	*11.64	12.00	0.48	1.00	28 00	4342
9.82	1.86	1.64	11.00	11.00	10.25	10.00	0.75	1.00	41 00	3345
5.58	2.23	1.64	11.19	11.00	10.23	10.00	0.96	1.00	38 00	4285
7.05	3.16	2.46	10.94	11.00	*9.63	10.00	1.31	1.00	47 00	3344
5.41	2.55	1.64	11.43	11.00	10.41	10.00	1.02	1.00	31 50	4809
9.10	2.10	1.64	11.35	11.00	10.74	10.00	0.61	1.00	41 00	3347
8.36	1.63	1.64	11.57	11.00	11.40	10.00	0.17	1.00	34 00	4343
6.50	1.82	1.64	16.49	15.00	10.20	10.00	6.29	5.00	47 00	3348
7.58	1.13	0.82	11.00	11.00	9.84	10.00	1.16	1.00	26 50	3622
6.19	0.93	0.82	12.64	11.00	10.23	10.00	2.41	1.00	28 00	4848
5.52	0.90	0.82	12.86	11.00	10.68	10.00	2.18	1.00	28 25	4770
10.77	1.88	1.65	10.84	11.00	*9.65	10.00	1.19	1.00	32 00	3710
8.00	1.55	1.65	12.73	11.00	10.98	10.00	1.75	1.00	34 25	4513
4.33	2.06	1.65	11.37	11.00	10.17	10.00	1.20	1.00	36 00	3967
8.93	2.43	2.47	11.52	11.00	10.18	10.00	1.34	1.00	40 00	3968
9.67	3.40	3.29	11.95	11.00	10.52	10.00	1.43	1.00	47 40	3966
4.75	0.90	0.82	9.64	9.00	8.53	8.00	1.11	1.00	25 50	4882
5.31	0.88	0.82	11.68	9.00	10.44	8.00	1.24	1.00	23 00	4846
2.81	0.88	0.82	10.37	9.00	8.42	8.00	1.95	1.00	26 75	4771
9.55	0.99	0.82	10.47	8.00	9.04	8.00	1.43	-----	-----	4013
2.14	2.13	1.65	10.60	11.00	*9.73	10.00	0.87	1.00	33 25	4877
5.06	2.54	1.65	12.03	11.00	11.80	10.00	0.23	1.00	32 00	4391
3.62	0.86	0.82	10.01	9.00	9.44	8.00	0.57	1.00	24 00	4390
9.64	1.45	1.00	12.42	11.00	11.53	10.00	0.89	-----	-----	3184

\*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.		Sample Taken From—	
	W. E. WHANN COMPANY, SUBSIDIARY OF THE AMERICAN AGRICUL- TURAL CHEMICAL CO., PHILA- DELPHIA, PA.			
3268	Whann's Chester Valley Grass and Grain,		S. Ellis Schwalm, Valley View, -----	
4842	Whann's Chester Valley Liberty Brand Supersulphate,		A. K. Drumbore, Hagersville, -----	
3396	Whann's Chester Valley Liberty Brand Superphosphate A. A.,		Norman Coates, Cochranville, -----	
4157	Whann's Chester Valley Liberty Brand Superphosphate A. A.,		Eschbach & Eschbach, Millersville, -----	
4841	Whann's Chester Valley XXX Ammoni- ated fertilizer,		A. K. Drumbore, Hagersville, -----	
	THE ROBERT A. WOOLDRIDGE COM- PANY, BALTIMORE, MD.			
3918	Wooldridge's Old Fidelity Phosphate, ---		Wm. Schaeffer, Tamaqua, -----	
3775	Wooldridge's Special Wheat and Grass Grower,		H. V. Smith, Turbotville, -----	
	YORK CHEMICAL WORKS, YORK, PA.			
4783	Dempwolf's Corn and Oats, -----		R. H. Clift, Prompton, -----	
3394	Dempwolf's Crop Grower, -----		Brown & Rea, Atglen, -----	
4189	Dempwolf's Crop Grower, -----		Girard Coal & Supply Co., Girard, -----	
4070	Dempwolf's Crop Grower, -----		Wallace Sherbine, Wilmore, -----	
4188	Dempwolf's Golden Sheaf, -----		Girard Coal & Supply Co., Girard, -----	
3165	Dempwolf's Golden Sheaf, -----		M. J. Sheffer, Hanover, -----	
4664	Dempwolf's Golden Sheaf, -----		John Shuey, Lewistown, -----	
3637	Dempwolf's Potato and Truck, -----		J. C. Ernst & Co., York, -----	
4669	Dempwolf's Potato and Truck, -----		W. H. Kramer, McCalisterville, -----	
4249	Dempwolf's Potato and Truck, -----		J. H. Summy, Landesville, -----	
3885	Dempwolf's Prosperity, -----		George J. Edelman, Northampton, -----	
4403	Dempwolf's Prosperity, -----		H. L. Leiberknecht, Hellam, -----	
3982	Dempwolf's Prosperity, -----		Harry Pyle & Sons, Chadds Ford Junction, -----	
3588	Dempwolf's R. B. Special, -----		M. B. Ebersole, Middletown, -----	
3662	Dempwolf's R. B. Special, -----		F. S. Swigert, Strasburg, -----	
3993	Dempwolf's R. B. Special, -----		Thomas Haines Co., Malvern, -----	
3395	Dempwolf's Royal Mixture, -----		Brown & Rea, Atglen, -----	
4413	Dempwolf's Royal Mixture, -----		W. S. Stuart, Carlisle, -----	
3934	Dempwolf's Royal Mixture, -----		H. S. Zook, Elverson, -----	
4293	Dempwolf's Spring Special, -----		H. S. Zook, Elverson, -----	
4250	Dempwolf's York Special, -----		J. H. Summy, Landisville, -----	
4603	Dempwolf's York Special, -----		C. A. Will, Rockwood, -----	
			Average, -----	

## PHOSPHORIC ACID FERTILIZERS—Concluded.

PHOSPHORIC ACID FERTILIZERS - Continued.										
Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.			
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	\$	
10.08	2.03	1.65	13.69	13.00	12.01	12.00	1.68	1.00	32 00	3268
9.71	0.92	0.82	14.80	11.00	14.48	10.00	0.32	1.00	28 00	4842
10.53	1.60	1.65	11.88	11.00	10.76	10.00	1.12	1.00	34 00	3396
8.47	1.55	1.65	11.75	11.00	10.49	10.00	1.26	1.00	38 00	4157
6.27	1.24	1.23	11.37	11.00	10.11	10.00	1.26	1.00	32 00	4841
10.00	1.51	1.65	11.62	11.00	10.41	10.00	1.21	1.00	-----	3918
7.90	1.43	1.23	11.31	11.00	10.10	10.00	1.21	1.00	32 00	3775
8.12	2.42	2.47	11.02	-----	10.56	10.00	0.46	-----	45 00	4783
8.09	0.94	0.82	11.26	-----	10.63	10.00	0.63	-----	26 00	3394
8.23	0.95	0.82	10.00	-----	*9.15	10.00	0.85	-----	25 42	4189
5.92	0.83	0.82	10.91	-----	9.97	10.00	0.94	-----	30 00	4070
7.62	0.88	0.82	8.24	-----	7.92	8.00	0.32	-----	23 90	4188
8.71	0.85	0.82	8.93	-----	8.45	8.00	0.48	-----	26 00	3165
5.41	0.68	0.82	10.77	-----	10.57	8.00	0.20	-----	-----	4664
7.35	4.41	4.11	9.41	-----	8.57	8.00	0.84	-----	55 00	3637
2.28	*3.87	4.11	10.40	-----	9.12	8.00	1.28	-----	38 00	4669
7.12	4.19	4.11	11.21	-----	10.05	8.00	1.16	-----	53 00	4249
7.61	1.74	1.65	13.88	-----	12.48	12.00	1.40	-----	33 40	3885
7.87	1.60	1.65	13.85	-----	12.29	12.00	1.56	-----	35 00	4403
9.10	1.67	1.65	14.08	-----	12.89	12.00	1.19	-----	36 00	3982
5.88	1.63	1.65	16.26	-----	10.00	10.00	6.17	-----	35 40	3588
7.71	1.87	1.65	16.51	-----	9.92	10.00	6.59	-----	40 00	3662
4.97	1.88	1.65	17.48	-----	10.18	10.00	7.30	-----	38 00	3993
9.92	1.62	1.65	12.03	-----	11.16	10.00	0.87	-----	32 50	3395
8.46	1.58	1.65	11.48	-----	10.57	10.00	0.91	-----	32 50	4413
7.51	1.70	1.65	11.37	-----	10.40	10.00	0.97	-----	34 50	3934
7.97	*2.69	3.29	12.58	-----	11.62	10.00	0.96	-----	49 50	4293
7.53	0.79	0.82	14.35	-----	13.98	12.00	0.37	-----	33 00	4250
5.28	0.99	0.82	13.43	-----	12.35	12.00	1.08	-----	27 50	4603
7.11	1.63	-----	11.42	-----	9.95	-----	1.47	-----	33 22	

\*Deficient.

TABLE NO. III.—GROUND  
Furnishing Nitrogen

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
4530	Fine Ground Bone, -----	King Brothers, Uniontown, -----
3984	Fine Ground Bone, -----	H. M. Long, Oxford, -----
4486	Fine Ground Bone, -----	G. A. Spencer, Waverly, -----
4360	High Grade Ground Bone, -----	Clark Hildebrand, Dallas, -----
3985	High Grade Ground Bone, -----	H. P. Passmore & Brother, Oxford, -----
3986	Pure Raw Bone, -----	H. P. Passmore & Brother, Oxford, -----
4298	Pure Raw Bone, -----	H. L. Stultz & Brother, Altoona, -----
4303	Pure Raw Bone, -----	Stultz Brothers, Hollidaysburg, -----
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.	
4321	Bone Meal, -----	W. S. Henderson, Alexandria, -----
3853	Bone Meal, -----	Kane Milling & Grocery Co., Kane, -----
4553	Bone Meal, -----	George B. Sprowls, Claysville, -----
3980	Raw Bone Meal, -----	Sellers Hoffman, Chadds Ford, -----
	ASSOCIATED CHEMICAL COMPANY, HAGERSTOWN, MD.	
4686	Fine Bone Meal, -----	J. P. Johnston, Mercer, -----
	BAUGH & SONS COMPANY, PHILADEL- PHIA, PA.	
4229	Bone Meal, -----	The Loucks Hardware Co., Scottdale, -----
	CHICAGO FEED & FERTILIZER CO., CHICAGO, ILL.	
4441	Magic Steamed Bone, -----	Holmes Seed Co., Harrisburg, -----
	COE-MORTIMER COMPANY, SUBSIDI- ARY OF THE AMERICAN AGRI- CULTURAL CHEMICAL CO., NEW YORK, N. Y.	
3187	Fine Ground Bone, -----	Abington Lumher Co., Dalton, -----
	JACOB DOLD PACKING COMPANY, BUFFALO, N. Y.	
4204	Dold Quality Bone Meal, -----	B. E. & J. T. Cokely, Scranton, -----
4192	Dold Quality Bone Meal, -----	S. F. McQuiston, Meadville, -----
	GRIFFITH & BOYD COMPANY, BALTI- MORE, MD.	
4284	Pure Fine Ground Bone Meal, -----	Garfield Milhous & Bro., Mendenhall, -----
	S. M. HESS & BROTHER, INC., SUB- SIDIARY OF THE AMERICAN AGRI- CULTURAL CHEMICAL CO., PHILA- DELPHIA, PA.	
4858	High Grade Ground Bone, -----	George H. Schaden, Catasauqua, -----
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
4089	Hubbard's Pure Raw Bone, -----	Luther Bogewief, Mifflinburg, -----
	LISTERS AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
4712	Listers Bone Meal, 1916, -----	Landis Brackhill, Kinzer, -----
4506	Listers Bone Meal, 1916, -----	W. S. Vansickler, Gravity, -----
	G. OBER & SONS COMPANY, BALTI- MORE, MD.	
4276	Pure Raw Bone Meal, -----	Clarence Fisher, Elkview, -----



## BONE FERTILIZERS.

and Phosphoric Acid.

and Phosphoric Acid.								
Moisture.	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.
	NITROGEN.		PHOSPHORIC ACID.					
	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.		
%	%	%	%	%	%	%	\$	
11.16	2.59	2.47	24.12	22.88	69	31	50 00	4530
3.33	2.68	2.47	23.70	22.88	57	43	48 00	3984
3.16	2.64	2.47	23.53	22.88	51	49	48 75	4486
3.92	3.90	3.29	23.11	20.59	58	42	43 00	4360
5.98	3.50	3.29	20.87	20.59	61	39	49 00	3985
6.43	4.40	3.70	*21.17	21 51	64	36	51 00	3986
7.20	4.01	3.70	21 90	21 51	50	50	60 00	4298
7.00	4.25	3.70	22.36	21.51	52	48	50 00	4303
2.90	2.73	2.47	23.68	22.00	64	36	-----	4321
2.67	2.69	2.47	22.53	22.00	58	42	52 00	3853
3.14	2.82	2.47	22.58	22.00	60	40	46 00	4553
7.40	4.09	3.70	23.38	21.50	54	46	-----	3980
2.95	2.52	2.47	23.79	22.89	58	42	47 00	4686
2.94	*2.15	2.47	*22.36	22.88	65	35	60 00	4229
3.93	2.91	-----	22.23	-----	74	26	70 00	4441
3.98	2.57	2.47	23.64	22.88	52	48	55 00	3187
3.95	2.98	2.47	23.22	23.00	76	24	60 00	4204
6.56	2.86	2.47	*21.65	23.00	73	27	45 00	4192
14.61	*2.94	3.30	*19.62	22.00	54	46	52 00	4284
3.60	*2.80	3.29	24.25	20.59	51	49	50 00	4858
6.36	3.72	3.69	24.15	22.50	45	55	52 00	4089
3.15	3.00	2.47	22.87	23.00	64	36	48 00	4712
5.88	3.08	2.47	25.52	23.00	63	37	45 00	4506
5.08	3.85	3.71	22.86	22.00	89	11	52 70	4276

\*Deficient.

TABLE III.—GROUND BONE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	PITTSBURGH PROVISION & PACKING COMPANY, PITTSBURGH, PA.	
4693	Pure Raw Bone Meal, -----	R. G. Allison, Ambridge, -----
3678	Pure Raw Bone Meal, -----	The I. W. Scott Co., Pittsburgh, -----
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
4098	Rasin's Fine Ground Bone, -----	John Duck, Beavertown, -----
	READING BONE FERTILIZER COMPANY, READING, PA.	
3590	Pure Bone Meal, -----	William Willits, Calcium, -----
	ROBERT A. REICHARD, ALLENTOWN, PA.	
3535	Raw Bone Meal, -----	J. B. Adams, Weatherly, -----
4814	Raw Bone Meal, -----	Bittner Brothers, Jordan, -----
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
4222	Royster's Fine Ground Bone Meal, -----	C. H. H. Bauman, Scranton, -----
3418	Royster's Pure Raw Bone Meal, -----	J. S. Dale, State College, -----
4268	Royster's Pure Raw Bone Meal, -----	H. E. Mullen, Christiana, -----
3229	Royster's Pure Raw Bone Meal, -----	Reynoldsville Hardware Co., Reynoldsville, -----
	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.	
3328	Fine Ground Bone, -----	T. E. Bradley, Spartansburg, -----
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.	
4722	Scott's Pure Bone Meal, -----	Fred Cross, Adamstown, -----
	SWIFT & COMPANY, BALTIMORE, MD.	
4103	Swift's Bone Meal Fertilizer, -----	W. B. Winey, Middleburg, -----
4241	Swift's Ground Beef Bone Fertilizer, -----	M. C. Stewart, Indiana, -----
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
4295	Pure Ground Bone, -----	James K. Lewis, Honeybrook, -----
	JACOB TRINLEY & SONS, LINFIELD, PA.	
4005	Pure Raw Bone Meal, -----	Mowrey-Latshaw Hdw. Co., Spring City, -----
	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA.	
3346	Pure Ground Bone, -----	M. O. Michener, Media, -----
	UNITED CHEMICAL ORGANIC PRODUCT CO., CHICAGO, ILL.	
3849	Calumet Special Pure Bone Meal, -----	Leonard Ritter, St. Marys, -----
	YORK CHEMICAL WORKS, YORK, PA.	
3596	Dempwolf's Pure Ground Bone, -----	Dover Farmers Co-operative Assn., Dover, -----
		Average, -----

## FERTILIZERS—Concluded.

FERTILIZERS—Continued.									
Moisture.	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.	
	NITROGEN.		PHOSPHORIC ACID.						
	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.			
%	%	%	%	%	%	%	\$		
4.66	4.04	3.70	*19.77	21.00	73	27	56 00	4693	
5.62	3.87	3.70	*19.10	21.00	68	32	44 00	3678	
3.17	2.81	2.47	24.22	22.88	62	38	47 00	4098	
8.14	2.91	2.46	23.76	18.00	55	45	50 00	3930	
6.86	4.07	3.70	*22.43	23.00	34	66	50 00	2535	
6.37	4.03	3.70	*22.73	23.00	24	76	49 00	4814	
3.34	2.93	2.47	*22.39	22.90	56	44	53 00	4222	
7.03	4.18	3.70	22.73	21.50	52	48	50 60	3418	
5.85	3.74	3.70	23.57	21.50	39	61	52 00	4268	
6.28	3.85	3.70	23.20	21.50	45	55	60 00	3229	
5.34	2.69	2.47	23.05	22.88	68	32	48 00	3328	
3.25	2.88	2.50	25.44	23.00	62	38	46 00	4722	
3.36	2.55	2.47	25.31	24.00	57	43	50 00	4103	
2.82	2.29	2.06	*26.11	27.00	72	28	45 00	4241	
2.50	2.48	2.46	23.50	23.00	67	33	45 00	4295	
5.63	4.79	3.70	20.12	20.00	40	60	46 00	4005	
8.10	4.51	2.46	*21.20	23.00	41	59	51 00	3346	
6.89	1.30	0.82	29.61	29.77	62	38	40 00	3849	
3.12	2.73	2.47	24.24	23.00	56	44	42 50	3596	
5.24	3.22	-----	23.06	-----	58	42	50 21	-----	

\*Deficient.

TABLE NO. IV.—ACIDULATED  
Furnishing

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.		
4395	Acid Phosphate 14%, -----	G. B. M. Baker, Abbottstown, -----
4165	Acid Phosphate 14%, -----	Charles McDowell, Mansfield, -----
4159	Acid Phosphate 16%, -----	Eschbach & Eschbach, Millersville, -----
4483	Acid Phosphate 16%, -----	G. A. Spencer, Waverly, -----
3350	Basic Lime Phosphate, -----	Edw. Brinton & Son, West Chester, -----
4493	Basic Lime Phosphate, -----	Farmers Supply Co., Ariel, -----
4549	Basic Lime Phosphate, -----	W. R. McCartney, Farmington, -----
4062	Packers Union Superior Acid Phosphate, -----	Wm. I. Brown, Mill Creek, -----
3799	Packers Union Superior Acid Phosphate, -----	S. Peck & Son, Nittany, -----
4073	Packers Union Superior Acid Phosphate, -----	F. E. Plummer, Wilmore, -----
3625	Susquehanna Dissolved S. C. Rock, -----	J. J. Jacobs, York Springs, -----
3990	Susquehanna Dissolved S. C. Rock, -----	H. P. Passmore & Bro., Oxford, -----
4677	Susquehanna High Grade Superphosphate, -----	T. M. McKee, Lewistown, -----
3989	Susquehanna High Grade Superphosphate, -----	H. P. Passmore & Bro., Oxford, -----
3645	Susquehanna High Grade Superphosphate, -----	George Richards, Smethport, -----
4060	Wheeler's High Grade Acid Phosphate, -----	Wm. I. Brown, Mill Creek, -----
3798	Wheeler's High Grade Acid Phosphate, -----	W. B. Heckman, Hubbersburgh, -----
4524	Wheeler's High Grade Acid Phosphate, -----	John Vansickel, Somerfield, -----
AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.		
3401	10% Acid Phosphate, -----	J. H. Neidigh, State College, -----
4398	American High Grade Acid Phosphate, -----	A. B. Brown, East Berlin, -----
3403	American High Grade Acid Phosphate, -----	J. H. Neidigh, State College, -----
4606	American High Grade Acid Phosphate, -----	C. G. Sichler, Somerset, -----
4138	High Grade Acid Phosphate, -----	Lancaster County Farmers Association, Inc., Manheim, -----
3406	High Grade Acid Phosphate, -----	J. H. Neidigh, State College, -----
3313	High Grade Acid Phosphate, -----	W. C. Work & Son, Cochran, -----
ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.		
4555	Armour's Acid Phosphate 16%, -----	W. H. Dunlap, Jr., Canonsburg, -----
4759	Armour's Acid Phosphate 16%, -----	Leroy Whitely, Forksville, -----
3869	Star Phosphate, -----	L. A. Chase & Son, Russell, -----
4021	Star Phosphate, -----	A. M. Grove & Co., Muddy Creek Forks, -----
3471	Star Phosphate, -----	P. J. Oesterling & Son, Butler, -----
4120	Tuscarora Acid Phosphate 14%, -----	Wm. Gates Estate, Kittanning, -----
4448	Tuscarora Acid Phosphate 16%, -----	Jacobs & Wright, Newport, -----
BAUGH & SONS COMPANY, PHILADEL- PHIA, PA.		
4536	Baugh's 16% Acid Phosphate, -----	Anderson Louch's Hdw. Co., Connellsville, -----
3788	Baugh's 16% Acid Phosphate, -----	A. W. Eves, Millville, -----
4387	Baugh's 16% Acid Phosphate, -----	G. C. Myers, Gardners, -----
4044	Baugh's 14% High Grade Acid Phosphate, -----	C. F. Frederick, Mercersburg, -----
3386	Baugh's 14% High Grade Acid Phosphate, -----	E. H. Keen & Co., Parkesburg, -----
4227	Baugh's 14% High Grade Acid Phosphate, -----	The Loucks Hardware Co., Scottsdale, -----
THE BERG COMPANY, PHILADELPHIA, PA.		
4531	Acid Phosphate 16%, -----	King Brothers, Uniontown, -----
BOWKER FERTILIZER COMPANY, SUB- SIDIARY OF AMERICAN AGRICUL- TURAL CHEMICAL COMPANY, NEW YORK, N. Y.		
3435	Bowker's 12% Acid Phosphate, -----	Bunker & Burdick, Millport, -----
3574	Bowker's 12% Acid Phosphate, -----	S. A. Fishburn, Penbrook, -----
3523	Bowker's 12% Acid Phosphate, -----	Kernochan & Co., Titusville, -----



## PHOSPHATE FERTILIZERS.

## Phosphoric Acid.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	\$		
4.70	15.15	15.00	14.37	14.00	0.78	1.00	21 75	4395
6.39	16.43	15.00	15.04	14.00	1.39	1.00	25 00	4165
7.84	17.54	17.00	17.06	16.00	0.48	1.00	25 00	4159
5.71	17.81	17.00	16.97	16.00	0.84	1.00	24 00	4483
4.15	14.86	-----	*12.55	13.00	2.31	-----	25 00	3350
1.40	15.21	-----	13.28	13.00	1.93	-----	27 00	4493
2.86	16.00	-----	13.17	13.00	2.83	-----	27 00	4549
8.27	14.93	15.00	14.13	14.00	0.85	1.00	20 00	4062
10.43	15.45	15.00	15.22	14.00	0.23	1.00	-----	3799
7.10	14.58	15.00	14.32	14.00	0.26	1.00	25 00	4073
6.85	15.87	15.00	14.55	14.00	1.02	1.00	22 00	3625
9.05	15.79	15.00	15.02	14.00	0.77	1.00	22 00	3990
7.78	17.16	17.00	16.61	16.00	0.55	1.00	22 50	4677
10.28	16.37	17.00	16.27	16.00	0.10	1.00	23 00	3989
7.50	17.54	17.00	17.00	16.00	0.54	1.00	23 25	4645
9.21	17.07	17.00	16.50	16.00	0.57	1.00	-----	4060
13.20	16.94	17.00	16.60	16.00	0.34	1.00	-----	3798
9.65	16.63	17.00	16.48	16.00	0.15	1.00	24 00	4524
7.45	11.03	11.00	10.86	10.00	0.17	1.00	20 25	3401
6.39	17.07	17.00	16.94	16.00	0.13	1.00	22 00	4398
10.45	17.25	17.00	17.11	16.00	0.14	1.00	23 75	3403
6.17	17.13	17.00	16.87	16.00	0.26	1.00	-----	4606
5.12	15.35	15.00	14.81	14.00	0.54	1.00	21 50	4138
9.65	15.24	15.00	15.00	14.00	0.24	1.00	22 50	3406
7.40	15.01	15.00	14.35	14.00	0.66	1.00	25 00	3313
3.53	17.26	16.50	16.25	16.00	1.01	0.50	26 00	4555
1.66	17.11	16.50	16.45	16.00	0.66	0.50	24 00	4759
6.16	14.59	14.50	*13.58	14 00	1.01	0.50	26 00	3869
6.46	15.18	14.50	15.04	14.00	0.14	0.50	21 25	4021
5.77	14.95	14.50	*13.67	14.00	1.28	0.50	23 00	3471
3.98	14.87	14.50	13.84	14.00	1.03	0.50	25 00	4120
5.82	16.54	16.50	16.22	16.00	0.32	0.50	23 75	4448
8.68	17.11	16.00	16.57	16.00	0.54	-----	28 00	4536
7.01	17.39	16.00	16.99	16.00	0.40	-----	-----	3788
10.72	16.47	16.00	16.06	16.00	0.41	-----	23 00	4387
9.27	17.05	14.00	16.60	14.00	0.45	-----	21 00	4044
11.95	15.87	14.00	15.76	14.00	0.11	-----	22 00	3386
9.72	16.89	14.00	16.12	14.00	0.77	-----	26 00	4227
7.14	16.75	-----	16.52	16.00	0.23	-----	27 50	4531
5.78	12.83	13.00	*11.43	12.00	1.40	1.00	25 00	3435
4.03	14.09	13.00	13.35	12.00	0.74	1.00	22 00	3574
5.89	12.90	13.00	*11.80	12.00	1.10	1.00	25 00	3323

\*Deficient.

TABLE IV.—ACIDULATED PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3487	Bowker's 16% Acid Phosphate, -----	Harmony Cereal Mills, Harmony, -----
3414	Bowker's 16% Acid Phosphate, -----	R. M. Smith, Centre Hall, -----
4197	Bowker's 16% Acid Phosphate, -----	J. A. Weller, Edinburg, -----
3866	Bowker's Soluble Phosphate, -----	M. Beshlin, Warren, -----
4131	Bowker's Soluble Phosphate, -----	Home Store Co., Rural Valley, -----
4291	Bowker's Soluble Phosphate, -----	Herman J. Mosteller, Glen Moore, -----
3690	S. B. BRODBECK, BRODBECK, PA. Brodbeck's Ruth Dissolved Phosphate, --	S. B. Brodbeck, Brodbeck, -----
	THE CENTRAL CHEMICAL COMPANY, THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.	
3741	C. C. C. Dissolved Phosphate 12%, ---	J. L. Seagers, Westfield, -----
3751	C. C. C. Dissolved Phosphate 14%, ---	G. W. Poley, Knoxville, -----
3742	C. C. C. Dissolved Phosphate 14%, ---	J. L. Seagers, Westfield, -----
3509	C. C. C. Dissolved Phosphate 16%, ---	Francis Baker, Everett, -----
3267	C. C. C. Dissolved Phosphate 16%, ---	Samuel Savidge, Hegins, -----
4766	C. C. C. Dissolved Phosphate 16%, ---	Wyalusing Hay Co., Wyalusing, -----
	COE-MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, NEW YORK, N. Y.	
4818	E. Frank Coe's Basic Fruit and Legume Phosphate, -----	Robert Pittenger, Easton, -----
4479	E. Frank Coe's High Grade Soluble Phos- phate, -----	Ahington Lumber Co., Dalton, -----
4567	E. Frank Coe's High Grade Soluble Phos- phate, -----	King, Hoge & Co., Waynesburg, -----
4756	E. Frank Coe's High Grade Soluble Phos- phate, -----	F. D. Lewis, New Albany, -----
4735	E. Frank Coe's 16% Superphosphate, ---	Eastbrook & Son, Rummerfield, -----
3397	E. Frank Coe's 16% Superphosphate, ---	Elmer Evy, Lemont, -----
4640	E. Frank Coe's 16% Superphosphate, ---	J. G. Jamieson Lumber Co., Tionesta, --
	COLUMBIA GUANO COMPANY, BALTI- MORE, MD.	
4605	Columbia High Grade 16% Acid Phos- phate, -----	D. A. Barron, Rockwood, -----
3944	Columbia High Grade 16% Acid Phos- phate, -----	J. P. Fisher, Douglassville, -----
3297	Columbia High Grade 16% Acid Phos- phate, -----	C. L. Shipman, Hughesville, -----
	CONSUMERS CHEMICAL CORPORATION, NEW YORK, N. Y.	
4605	Columbia High Grade 16% Acid Phos- phate, -----	H. F. Gump & Son, Everett, -----
4518	Consumers High Grade Acid Phosphate, ---	Murry Co., Honesdale, -----
4170	Consumers High Grade Acid Phosphate, ---	Sawyer Brothers, Liberty, -----
3724	Consumers Pure Sure Acid Phosphate, --	H. F. Gump & Son, Everett, -----
4505	Consumers Pure Sure Acid Phosphate, --	H. S. Lockwood, South Canaan, -----
	JOSIAH COPE & COMPANY, SUB- SIDIARY OF THE AMERICAN AGRI- CULTURAL CHEMICAL COMPANY, BALTIMORE, MD.	
3355	High Grade Superphosphate, -----	F. E. Bailey, Northbrook, -----
4701	High Grade Superphosphate, -----	Jones Evanson, Christiana, -----
	DuBOIS FERTILIZER WORKS, INC., Du- BOIS, PA.	
3855	Acid 14% Phosphate, 1918, -----	George Burnham, Eldred, -----
3686	DuBois 16% Acid Phosphate, 1918, ---	D. A. Hankey, Parnassus, -----
4646	DuBois 16% Acid Phosphate, 1918, ---	Alanson Kinney, Port Allegany, -----
3856	Lime Phosphate, 1918, -----	George Burnham, Eldred, -----

## PHATE FERTILIZERS—Continued.

PHOSPHORIC ACID.								
Moisture.	Total.		Available.		Insoluble.		Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	\$	
9.80	16.62	17.00	*15.68	16.00	0.94	1.00	24 50	3487
11.10	16.90	17.00	16.75	16.00	0.15	1.00	24 00	3414
3.81	17.64	17.00	16.55	16.00	1.09	1.00	27 00	4197
4.15	15.33	15.00	14.39	14.00	0.94	1.00	23 50	3866
6.05	15.75	15.00	14.61	14.00	1.14	1.00	24 95	4131
10.16	16.53	15.00	14.96	14.00	1.57	1.00	21 00	4291
8.74	13.90	15.00	*13.70	14.00	0.20	1.00	21 50	3690
6.81	13.65	-----	13.01	12.00	0.64	-----	22 50	3741
6.86	17.20	-----	15.64	14.00	1.56	-----	24 00	3751
6.19	14.98	-----	14.51	14.00	0.47	-----	24 00	3742
7.73	17.20	-----	16.10	16.00	1.10	-----	23 00	3509
10.42	17.82	-----	16.99	16.00	0.83	-----	-----	3267
7.62	17.92	-----	17.73	16.00	0.19	-----	23 00	4766
1.78	15.88	14.00	13.52	13.00	2.36	1.00	24 00	4818
6.25	16.01	15.00	14.57	14.00	1.44	1.00	25 00	4479
5.94	14.61	15.00	14.34	14.00	0.27	1.00	25 00	4567
6.74	15.88	15.00	14.97	14.00	0.91	1.00	21 25	4756
9.30	16.43	17.00	16.34	16.00	0.09	1.00	23 00	4735
10.85	17.39	17.00	17.13	16.00	0.26	1.00	22 50	3397
7.00	17.21	17.00	16.92	16.00	0.29	1.00	26 00	4640
6.51	17.87	16.50	17.24	16.00	0.63	0.50	-----	4605
5.68	17.31	16.50	16.54	16.00	0.77	0.50	24 00	3944
8.00	18.48	16.50	17.46	16.00	1.02	0.50	24 00	3297
5.74	17.25	17.00	17.08	16.00	0.17	1.00	24 00	3723
7.51	18.24	17.00	17.47	16.00	0.77	1.00	27 00	4518
6.81	17.55	17.00	16.41	16.00	1.14	1.00	26 00	4170
9.25	11.99	15.00	*10.89	14.00	1.10	1.00	23 00	3724
4.35	15.83	15.00	14.75	14.00	1.08	1.00	26 00	4505
12.40	16.81	17.00	16.70	16.00	0.11	1.00	23 00	3355
4.21	17.40	17.00	16.88	16.00	0.52	1.00	22 00	4701
2.89	11.77	15.00	*11.03	14.00	0.74	1.00	24 00	3855
12.55	16.51	17.00	16.27	16.00	0.24	1.00	25 00	3686
6.95	13.88	17.00	*13.27	16.00	0.61	1.00	27 00	4646
1.69	8.56	9.00	*6.54	8.00	2.02	1.00	23 00	3856

\*Deficient.

TABLE IV.—ACIDULATED PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	EASTERN GUANO COMPANY, NEW YORK, N. Y.	
4427	Eastern Dissolved Phosphate 16%, -----	Diehl, Omwake & Diehl, Chambersburg, --
4687	Eastern Dissolved Phosphate 16%, -----	J. P. Johnston, Mercer, -----
3213	Eastern Dissolved Phosphate 16%, -----	John A. Magee, Clarion, -----
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
3840	Acid Phosphate 14%, -----	H. H. Martin, Manheim, -----
3843	Acid Phosphate 16%, -----	H. H. Martin, Manheim, -----
	GODFREY CO-OPERATIVE FERTILIZER & CHEMICAL CO., NEWARK, N. J.	
3766	Godfrey's Acid Phosphate 16%, -----	Equity Co-operative Exchange, Wellsboro,
4778	Godfrey's Acid Phosphate 16%, -----	Charles Taylor, Windham, -----
	GRIFFITH & BOYD COMPANY, BALTIMORE, MD.	
4633	High Grade Acid Phosphate 14%, -----	L. A. Meyers, Hooverville, -----
3287	High Grade Acid Phosphate 14%, -----	Weaver & Callahan, Montoursville, -----
3779	High Grade Acid Phosphate 16%, -----	Hartley & Blaine, Turbotville, -----
3176	High Grade Acid Phosphate 16%, -----	D. A. Sharrer & Son, New Oxford, -----
3370	High Grade Acid Phosphate 16%, -----	A. M. F. Stiteler, Uwehland, -----
	S. M. HESS & BROTHER, INC., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
3333	Acid Phosphate, -----	Stow Lumber & Coal Co., Harbor Creek,
4381	Acid Phosphate, -----	C. L. Tressler, Conyngham, -----
4042	Special High Grade Acid Phosphate, -----	Frank Reighaul, Bedford, -----
3298	Special High Grade Acid Phosphate, -----	Harry Shipman, Hughesville, -----
4748	Special High Grade Acid Phosphate, -----	Calvin Warburton, Canton, -----
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
4090	Hubbard's 14% Phosphate, -----	Luther Bogewief, Mifflinburg, -----
4733	Hubbard's 14% Phosphate, -----	Wysox Produce Co., Wysox, -----
3409	Hubbard's 16% Phosphate, -----	John Bathgate, Lemont, -----
4495	Hubbard's 16% Phosphate, -----	Farmers Supply Co., Ariel, -----
3631	Hubbard's 16% Phosphate, -----	J. E. Moul, Iron Ridge, -----
	M. P. HUBBARD & COMPANY, INC., BALTIMORE, MD.	
4705	Hubbard's Soluble Phosphate 14%, -----	A. Herr & Bro., Quarryville, -----
3701	Hubbard's Soluble Phosphate 14%, -----	J. P. Schuchart, New Freedom, -----
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
4167	Buffalo Sixteen Per Cent., -----	G. C. Reuscher, Blossburg, -----
3321	I. A. C. Acid Phosphate, -----	Frank P. Allen, Titusville, -----
	THE JARECKI CHEMICAL COMPANY, SANDUSKY, O.	
3222	Acid Phosphate, -----	J. F. McClain, Miola, -----
	THE LANCASTER CHEMICAL COMPANY, LANCASTER, PA.	
3593	No. 10 Economist, -----	Brubaker & Espenshade, Middletown, -----
4415	No. 10 Economist, -----	J. D. Burkhardt, Newville, -----
4129	No. 10 Economist, -----	S. N. Moore, Echo, -----
4416	No. 16 Phosphoric Acid Special, -----	J. D. Burkhardt, Newville, -----
4128	No. 16 Phosphoric Acid Special, -----	S. N. Moore, Echo, -----



## PHATE FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	\$	
6.63	17.73	-----	16.75	16.00	0.98	-----	24 00	4427
5.00	17.26	-----	16.69	16.00	0.57	-----	23 50	4687
10.05	16.37	-----	*15.21	16.00	1.16	-----	25 00	3213
7.82	16.00	15.00	15.55	14.00	0.45	1.00	22 00	3840
10.13	16.86	17.00	16.40	16.00	0.46	1.00	-----	3843
10.20	16.33	16.50	15.93	16.00	0.40	0.50	25 00	3766
9.16	17.34	16.50	16.92	16.00	0.42	0.50	22 50	4778
5.20	17.00	15.00	15.29	14.00	1.71	1.00	-----	4633
10.32	16.14	15.00	14.99	14.00	1.15	1.00	24 00	3287
6.08	16.00	17.00	*15.11	16.00	0.89	1.00	23 50	3779
10.35	17.12	17.00	16.29	16.00	0.83	1.00	21 68	3176
11.94	16.03	17.00	*15.52	16.00	0.51	1.00	22 50	3370
7.44	15.31	13.00	13.98	12.00	1.33	1.00	22 00	3333
6.03	15.32	13.00	14.81	12.00	0.51	1.00	19 00	4381
7.39	17.25	17.00	17.16	16.00	0.09	1.00	22 90	4042
12.52	17.28	17.00	17.02	16.00	0.26	1.00	22 50	3298
8.87	16.97	17.00	16.61	16.00	0.36	1.00	24 00	4748
6.14	18.59	15.00	17.53	14.00	1.06	1.00	23 00	4090
2.64	17.79	15.00	17.04	14.00	0.75	1.00	22 00	4733
7.52	18.70	17.00	16.45	16.00	2.25	1.00	22 57	3400
8.40	16.71	17.00	16.25	16.00	0.46	1.00	27 00	4495
5.74	17.51	17.00	16.49	16.00	1.02	1.00	22 50	3631
4.47	15.35	15.00	14.23	14.00	1.12	1.00	20 50	4705
8.46	13.39	15.00	*13.22	14.00	0.17	1.00	21 00	3701
7.42	17.22	17.00	17.00	16.00	0.22	1.00	26 00	4167
8.96	17.79	17.00	16.63	16.00	1.16	1.00	27 25	3321
12.22	17.25	17.00	16.00	16.00	1.25	1.00	25 25	3222
5.30	11.86	11.00	*8.51	10.00	3.35	1.00	18 25	3593
5.38	11.19	11.00	*9.02	10.00	2.17	1.00	19 00	4415
5.83	12.28	11.00	10.70	10.00	1.58	1.00	20 00	4129
10.81	17.59	17.00	*15.17	16.00	2.42	1.00	-----	4416
8.37	15.89	17.00	*13.58	16.00	2.31	1.00	22 00	4128

\*Deficient.

TABLE IV.—ACIDULATED PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
3291	Levan's Acid Phosphate 16%, -----	Gheen, Spigelmeyer & Phleger, Antes Fort,
3236	Levan's Acid Phosphate 16%, -----	Charles Welehans, Hummelstown, -----
4727	Levan's Acid Phosphate 16%, -----	Jos. Wertz, Washington Boro., -----
	LISTERS AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
3737	Listers Buyers Choice Acid Phosphate, --	D. B. Griffith, Wolfshurg, -----
3685	Listers Buyers Choice Acid Phosphate, --	R. J. Toepfer, Tarentum, -----
4508	Listers Buyers Choice Acid Phosphate, --	W. S. Vansickler, Gravity, -----
3302	Listers High Grade Acid Phosphate, -----	G. B. M. Frey, Muney, -----
4317	Listers High Grade Acid Phosphate, -----	L. N. Miller, Petersburg, -----
3479	Listers High Grade Acid Phosphate, -----	Morrow & Buxton, Valenheia, -----
3731	Listers Soluble Phosphate, -----	D. B. Griffith, Wolfshurg, -----
	FREDERICK LUDLAM COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
4579	Ludlam's Ceerops Fertilizers High Grade Dissolved Phosphate, -----	N. B. Shoher, Garrett, -----
	THE MARTIN FERTILIZER COMPANY, PHILADELPHIA, PA.	
3978	Martin's Acid Phosphate 16%, -----	Wm. C. Ball, Media, -----
4113	Martin's Acid Phosphate 16%, -----	H. R. Seibert, Gibsonia, -----
	THE MILLER FERTILIZER COMPANY, BALTIMORE, MD.	
4105	Acid Phosphate 16%, -----	Elmer Zeehman, Middleburg, -----
	NASSAU FERTILIZER COMPANY, NEW YORK, N. Y.	
3512	High Grade Superphosphate, -----	J. H. Brown, Loysburg, -----
3953	High Grade Superphosphate, -----	Heffner-Dietrich Co., Kutztown, -----
4373	High Grade Superphosphate, -----	H. S. Young, Conyngham, -----
4750	Soluble Phosphate, -----	P. S. Crandall, Alba, -----
4474	Soluble Phosphate, -----	B. J. Crisman, Factoryville, -----
3499	Soluble Phosphate, -----	George W. Oldham, Reynoldsville, -----
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
4382	N. A. C. Brand High Grade Acid Phosphate, -----	Luzerne Co. Farm Bureau, Wilkes-Barre,
3683	N. A. C. Brand High Grade Acid Phosphate, -----	The I. W. Scott Co., Pittsburgh, -----
3364	N. A. C. Brand High Grade Acid Phosphate, -----	Thomas & Howell, Whitford, -----
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
4385	Ober's High Grade Acid Phosphate 16%, -----	J. H. Duttera, New Oxford, -----
4275	Ober's High Grade Acid Phosphate 16%, -----	Clarence Fisher, Elkview, -----
4580	Ober's High Grade Acid Phosphate 16%, -----	N. B. Shoher, Garret, -----
	OYLER & SPANGLER FERTILIZER WORKS, INC., GETTYSBURG, PA.	
3177	16 Per Cent., -----	Harry Zepp, Gettysburg, -----
	PATAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
4827	Patapseo 10% Acid Phosphate, -----	J. E. Noble, Quakertown, -----
4487	Patapseo High Grade Acid Phosphate, --	H. A. Cole, Dalton, -----
4316	Patapseo High Grade Acid Phosphate, --	Hutehison & Goodwin, Huntingdon, -----
4548	Patapseo High Grade Acid Phosphate, --	Russell Brothers, Washington, -----

## PHATE FERTILIZERS—Continued.

PHOSPHORIC ACID.									Selling price per ton at place of selection.	Chemist's number.
Moisture.	Total.		Available.		Insoluble.					
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.				
%	%	%	%	%	%	%	\$			
8.81	17.13	17.00	16.02	16.00	1.11	1.00	22 00	3291		
9.05	17.93	17.00	17.05	16.00	0.88	1.00	3236			
3.94	17.92	17.00	17.79	16.00	0.13	1.00	25 00	4727		
7.74	15.28	15.00	14.27	14.00	1.01	1.00	22 00	3737		
8.65	14.76	15.00	14.11	14.00	0.65	1.00	27 00	3685		
7.14	15.36	15.00	15.00	14.00	0.36	1.00	21 75	4508		
6.92	17.95	17.00	17.73	16.00	0.22	1.00	24 00	3302		
5.81	17.72	17.00	16.43	16.00	1.29	1.00	22 00	4317		
13.27	17.57	17.00	17.16	16.00	0.41	1.00	24 00	3479		
7.75	13.32	13.00	12.64	12.00	0.68	1.00	23 00	3731		
7.90	17.67	17.00	17.48	16.00	0.19	1.00	23 75	4579		
8.81	16.76	16.75	16.19	16.00	0.57	0.75	19 95	3978		
8.93	15.54	16.75	*15.48	16.00	0.06	0.75	26 00	4113		
4.64	15.50	16.50	*14.87	16.00	0.63	0.50	26 00	4105		
8.12	17.83	17.00	17.52	16.00	0.31	1.00	24 00	3512		
9.64	16.42	17.00	16.08	16.00	0.34	1.00	25 00	3953		
6.48	17.71	17.00	17.03	16.00	0.68	1.00	24 00	4373		
5.83	16.39	15.00	15.38	14.00	1.01	1.00	21 00	4750		
6.18	15.87	15.00	14.59	14.00	1.28	1.00	23 75	4474		
6.50	15.29	15.00	14.52	14.00	0.77	1.00	20 75	3499		
9.31	17.13	17.00	16.22	16.00	0.91	1.00	20 50	4382		
8.95	17.65	17.00	16.62	16.00	1.03	1.00	27 00	3683		
8.10	18.25	17.00	16.66	16.00	1.59	1.00	20 00	3364		
8.70	17.20	17.00	16.89	16.00	0.31	1.00	22 00	4385		
9.65	17.58	17.00	17.24	16.00	0.34	1.00	21 75	4275		
8.15	17.58	17.00	17.32	16.00	0.26	1.00	23 25	4580		
6.63	18.64	-----	17.44	16.00	1.20	-----	-----	3177		
4.17	11.65	11.00	10.95	10.00	0.70	1.00	18 75	4827		
6.31	18.05	17.00	16.52	16.00	1.53	1.00	25 00	4487		
7.94	17.00	17.00	16.23	16.00	0.77	1.00	23 00	4316		
8.63	17.09	17.00	16.71	16.00	0.38	1.00	27 00	4548		

\*Deficient.

TABLE IV.—ACIDULATED PHOS

Chemist's number.	Name of Manufacturer and Brand.		Sample Taken From—	
3769	Patapsco	Pure Dissolved S. C. Phosphate, -----	Wm. E. Boyer, Mooresburg, -----	
4314	Patapsco	Pure Dissolved S. C. Phosphate, -----	Hutchison & Goodwin, Huntingdon, -----	
4609	Patapsco	Pure Dissolved S. C. Phosphate, -----	Wilson Schrock, Somerset, -----	
	PIEDMONT MT. AIRY GUANO COMPANY, BALTIMORE, MD.			
4074	Piedmont	14% Acid Phosphate, -----	A. F. Stutzman, Johnstown, -----	
	PITTSBURGH PROVISION AND PACKING COMPANY, PITTSBURGH, PA.			
4557	Acid	Phosphate, -----	Denny & Allison, Hickory, -----	
	THE POLLECK FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.			
4596	Dissolved S. C.	Phosphate, -----	A. O. Beal, Sand Patch, -----	
3739	High Grade	Superphosphate, -----	Irvin Earnest, Point, -----	
3513	High Grade	Superphosphate, -----	John L. Longenecker, Woodbury, -----	
3415	High Grade	Superphosphate, -----	E. C. Ross, Lemont, -----	
4597	Magic	Phosphate, -----	A. O. Beal, Sand Patch, -----	
3503	Magic	Phosphate, -----	Irvin Earnest, Point, -----	
3381	Magic	Phosphate, -----	Richard Scully, Pomeroy, -----	
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.			
3388	Rasin's	Acid Phosphate 14%, -----	E. H. Keen & Co., Parkesburg, -----	
3389	Rasin's	16% Acid Phosphate, -----	E. H. Keen & Co., Parkesburg, -----	
4407	Rasin's	16% Acid Phosphate, -----	H. B. Low & Son, Orangeville, -----	
3846	Rasin's	16% Acid Phosphate, -----	Leonard Ritter, St. Marys, -----	
	READING BONE FERTILIZER COMPANY, READING, PA.			
4768	14% Clear	Acid Phosphate, -----	Jos. Kelly, St. Joseph, -----	
3674	14% Clear	Acid Phosphate, -----	Krause & Frechling, Marwood, -----	
3219	14% Clear	Acid Phosphate, -----	John P. Reed, Miola, -----	
4320	16% Clear	Acid Phosphate, -----	F. L. Black, Alexandria, -----	
3528	16% Clear	Acid Phosphate, -----	John Hamm, Weatherly, -----	
4658	16% Clear	Acid Phosphate, -----	George Richards, Smethport, -----	
	READING CHEMICAL COMPANY, READING, PA.			
4341	Acme Brand	-----	Moses Light, Myerstown, -----	
3294	High Grade	Phosphate, -----	William Hess, Hughesville, -----	
4755	High Grade	Phosphate, -----	N. J. Norton, New Albany, -----	
4176	High Grade	Phosphate, -----	H. L. McCloskey, Beech Creek, -----	
4362	Reading Clear	Acid Phosphate, -----	C. W. Honeywell, Dallas, -----	
4006	Reading Clear	Acid Phosphate, -----	A. K. Kulp, Pottstown, -----	
4405	Reading Clear	Acid Phosphate, -----	W. W. Parker, Rohrsburg, -----	
	ROBERT A. REICHLARD, ALLENTOWN, PA.			
3881	Acid	Phosphate, -----	J. W. Bartholomew, Bath, -----	
3833	Acid	Phosphate, -----	L. K. Ziegler, Lititz, -----	
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.			
3872	Royster's	12% Acid Phosphate, -----	Putman & Parker, Columbus, -----	
4048	Royster's	14% Acid Phosphate, -----	Charles Huston & Brother, Three Springs, -----	
3474	Royster's	14% Acid Phosphate, -----	P. J. Oesterling & Son, Butler, -----	
4218	Royster's	14% Acid Phosphate, -----	I. G. Williams, Arifel, -----	



## PHATE FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	\$	
7.29	16.68	15.00	16.28	14.00	0.40	1.00	21 75	3769
6.58	15.24	15.00	14.53	14.00	0.71	1.00	21 00	4314
7.03	15.66	15.00	15.05	14.00	0.61	1.00	28 00	4609
3.35	15.46	15.00	13.95	14.00	1.51	1.00	24 00	4074
4.79	13.65	14.00	12.53	11.00	1.12	3.00	28 00	4557
6.12	15.29	15.00	15.18	14.00	0.11	1.00	26 00	4596
5.39	16.57	17.00	16.03	16.00	0.54	1.00	23 00	3739
5.84	17.90	17.00	17.30	16.00	0.60	1.00	23 00	3513
10.85	17.11	17.00	17.00	16.00	0.71	1.00	23 00	3415
5.53	15.09	11.00	14.45	10.00	0.64	1.00	24 50	4597
5.14	11.34	11.00	10.86	10.00	0.48	1.00	19 50	3503
6.38	10.84	11.00	10.15	10.00	0.69	1.00	20 25	3381
9.65	16.03	15.00	15.62	14.00	0.41	1.00	22 00	3388
11.00	16.85	17.00	16.22	16.00	0.63	1.00	23 00	3389
5.68	16.97	17.00	16.36	16.00	0.61	1.00	23 00	4407
7.48	17.78	17.00	17.73	16.00	0.05	1.00	25 00	3846
6.48	16.37	15.00	15.43	14.00	0.94	1.00	23 00	4768
9.45	15.96	15.00	14.28	14.00	1.68	1.00	25 00	3674
8.64	16.01	15.00	14.43	14.00	1.58	1.00	25 00	3219
8.85	17.23	17.00	16.83	16.00	0.40	1.00	23 00	4320
7.94	18.29	17.00	17.55	16.00	0.74	1.00	24 50	3528
5.09	16.67	17.00	*14.94	16.00	1.73	1.00	24 00	4653
7.33	11.29	11.00	10.37	10.00	0.92	1.00	22 00	4341
11.00	17.35	17.00	*15.62	16.00	1.73	1.00	25 00	3294
7.46	16.70	17.00	16.69	16.00	0.01	1.00	24 00	4755
7.40	18.38	17.00	17.10	16.00	1.28	1.00	24 00	4176
6.82	15.75	15.00	15.21	14.00	0.54	1.00	23 75	4362
7.96	14.58	15.00	14.07	14.00	0.51	1.00	24 00	4006
7.63	15.40	15.00	15.36	14.00	0.04	1.00	22 17	4405
10.48	14.32	15.00	14.10	14.00	0.22	1.00	19 75	3881
9.42	14.54	15.00	14.09	14.00	0.45	1.00	20 50	3833
6.30	14.73	12.50	13.65	12.00	1.08	0.50	25 00	3872
3.64	14.94	14.50	14.34	14.00	0.60	0.50	23 50	4048
9.25	16.53	14.50	15.64	14.00	0.89	0.50	23 00	3474
4.28	14.67	14.50	13.93	14.00	0.74	0.50	23 00	4218

\*Deficient.

TABLE IV.—ACIDULATED PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3416	Royster's High Grade 16% Acid Phosphate, -----	J. S. Dale, State College, -----
3480	Royster's High Grade 16% Acid Phosphate, -----	Mars Milling & Feed Co., Mars, -----
4656	Royster's High Grade 16% Acid Phosphate, -----	Smith Brothers, Bradford, -----
3197	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y. Soluble Phosphate, -----	Hellam Farmers Co-operative Association, Hellam. -----
3939	THE SCOTT FERTILIZER COMPANY, ELKTON, MD. Scott's Tip Top Soluble Phosphate 16%, -----	Levi Beiler, Elverson, -----
3544	Scott's Tip Top Soluble Phosphate 16%, -----	Nathan Bollinger, Little Gap, -----
3976	Scott's Tip Top Soluble Phosphate 16%, -----	B. F. Compton & Son, Crum Lynne, -----
3895	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD. 14% Acid Phosphate, -----	A. H. Remaly, Easton, -----
3876	16% Acid Phosphate, -----	Wm. D. Kunkel, Bath, -----
4172	SWIFT & COMPANY, BALTIMORE, MD. Swift's Garden City Phosphate 14%, -----	R. E. Mase, Liberty, -----
3770	Swift's Garden City Phosphate 14%, -----	E. E. Ream & Son, Mansdale, -----
3465	Swift's Garden City Phosphate 14%, -----	William H. Seigfried, Kempton, -----
4428	Swift's High Grade Acid Phosphate 16%, -----	Diehl, Omwake & Diehl, Chambersburg, -----
3338	Swift's High Grade Acid Phosphate 16%, -----	V. L. Rouse, North East, -----
4734	Swift's High Grade Acid Phosphate 16%, -----	Wysox Produce Co., Wysox, -----
4226	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA. 16% Acid Phosphate, -----	Thos. H. Gallentine, Scottdale, -----
4820	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA. Dissolved Rock, -----	T. M. Gehman, Macungie, -----
3746	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, PHILADELPHIA, PA. 16% Acid Phosphate, -----	Frank A. Ackley, Westfield, -----
4511	16% Acid Phosphate, -----	E. M. Curtis, Ariel, -----
4372	16% Acid Phosphate, -----	Emil Frederick, Conyngham, -----
4592	WASHINGTON, ALEXANDER & COOK CO., CHARLES TOWN, W. VA. W. A. & C.'s Economy Corn Grower, -----	E. S. Kelly, Gettysburg, -----
3517	THE ROBERT A. WOOLDRIDGE COMPANY, BALTIMORE, MD. Wooldridge's High Grade Acid Phosphate, -----	Cyrus E. Brumbaugh, New Enterprise, -----
4274	Wooldridge's High Grade Acid Phosphate, -----	Franklin G. Evans, Kelton, -----
3794	Wooldridge's High Grade Acid Phosphate, -----	D. C. Harpster, Port Matilda, -----
3994	YORK CHEMICAL WORKS, YORK, PA. Dempwolf's Dissolved Phosphate, -----	Thomas Haines & Co., Malvern, -----
3719	Dempwolf's Dissolved Phosphate, -----	J. S. Hershberger, Everett, -----
3167	Dempwolf's Dissolved Phosphate, -----	M. J. Sheffer, Hanover, -----
3718	Dempwolf's Superphosphate, -----	J. S. Hershberger, Everett, -----
3391	Dempwolf's Superphosphate, -----	E. H. Keen & Co., Parkeshurg, -----
4604	Dempwolf's Superphosphate, -----	C. A. Will, Rockwood, -----
		Average, -----

## PHATE FERTILIZERS—Concluded.

## PHOSPHORIC ACID.

Moisture.	Total.		Available.		Insoluble.		Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	\$	
11.00	17.81	16.50	16.80	16.00	1.01	0.50	23 00	3416
4.40	18.53	16.50	17.36	16.00	1.11	0.56	24 00	3480
7.83	17.92	16.50	16.95	16.00	0.97	0.50	28 00	4656
11.37	16.70	17.00	16.11	16.00	0.59	1.50	-----	3197
9.71	16.63	17.00	16.06	16.00	0.57	1.00	-----	3989
10.64	17.37	17.00	16.73	16.00	0.64	1.00	22 00	3544
9.64	16.63	17.00	16.50	16.00	0.13	1.00	30 00	3976
5.79	15.49	15.00	14.09	14.00	1.40	1.00	19.00	3895
11.81	15.68	17.00	*14.40	16.00	1.28	1.00	23 75	3876
3.81	14.63	14.00	*13.47	14.00	1.16	-----	23 52	4172
7.05	16.60	14.00	15.58	14.00	1.02	-----	21 50	3770
4.16	10.80	14.00	*10.07	14.00	0.73	-----	21 00	3465
3.36	17.90	16.00	16.59	16.00	1.31	-----	24 00	4428
10.85	17.31	16.00	*15.74	16.00	1.57	-----	24 50	3338
2.54	17.18	16.00	15.93	16.00	1.25	-----	23 00	4734
9.59	17.22	16.50	17.03	16.00	0.19	0.50	26 00	4226
3.27	16.01	15.00	14.96	14.00	1.05	1.00	22 00	4820
6.94	17.49	17.00	*15.63	16.00	1.86	1.00	24 00	3746
5.92	17.96	17.00	16.57	16.00	1.39	1.00	24 00	4511
6.03	17.41	17.00	16.58	16.00	0.83	1.00	23 50	4372
4.95	12.70	13.00	12.56	12.00	0.14	1.00	21 00	4392
6.47	17.83	17.00	17.50	16.00	0.33	1.00	22 00	3511
11.62	16.71	17.00	16.21	16.00	0.50	1.00	23 00	4274
8.86	17.65	17.00	17.51	16.00	0.14	1.00	24 00	3794
9.36	15.00	-----	14.92	14.00	0.08	-----	23 00	3991
8.79	14.73	-----	14.31	14.00	0.42	-----	22 00	3719
9.07	14.62	-----	13.89	14.00	0.73	-----	22 75	3167
9.15	16.62	-----	16.06	16.00	0.56	-----	24 00	3718
10.77	17.18	-----	16.96	16.00	0.22	-----	23 00	3391
6.33	17.17	-----	17.02	16.00	0.15	-----	-----	4604
7.43	16.14	-----	15.35	-----	0.79	-----	23 45	-----

\*Deficient.

TABLE NO. V.—ROCK AND  
Furnishing Phosphoric

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
3992	BALTIMORE PULVERIZING COMPANY, BALTIMORE, MD. Corn and Grain Grower, -----	Cecil Reynolds, Oxford, -----
4515	THE CONSUMERS CHEMICAL CORPOR- ATION, NEW YORK, N. Y. Consumers Pure-Sure Potash Mixture, ----	Murry Co., Honesdale -----
3705	KOLLER FERTILIZER COMPANY, SEITZ- LAND, PA. Koller's Special Phosphate, -----	Summit Lumber Co., New Freedom, ----
3538	THE SUPERIOR GUANO COMPANY, BALTIMORE, MD.	Kemerer Hardware Co., Lehighton, -----
3874	Half and Half, -----	Wm. D. Kunkel, Bath, -----
4816	Half and Half, -----	H. D. Sittler, Trexlertown, -----
		Average, -----



## POTASH FERTILIZERS.

## Acid and Potash.

Moisture.	Phosphoric Acid.						Potash.				Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.		Present as muriate.	Present as sulphate.				
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.						
%	%	%	%	%	%	%	%	%	%	%	\$	
5.25	12.97	13.00	*9.14	12.00	3.83	1.00	1.04	1.00	1.04	-----	34 60	3992
5.90	11.03	11.00	*9.61	10.00	1.42	1.00	0.98	1.00	0.98	-----	30 00	4515
9.40	10.20	7.00	8.25	7.00	1.95	-----	2.09	2.00	2.09	-----	35 00	3705
3.49	9.21	9.00	*7.30	8.00	1.91	1.00	1.32	1.25	-----	1.32	30 50	3538
4.64	9.38	9.00	*7.80	8.00	1.58	1.00	1.41	1.25	-----	1.41	27 50	3874
2.17	10.65	9.00	9.55	8.00	1.10	1.00	1.18	1.25	0.54	0.64	28 00	4816
5.14	10.57	-----	8.61	-----	1.96	-----	1.34	-----	-----	-----	30 93	

\*Deficient.

TABLE NO. VI.—MISCELL

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	NITRATE OF SODA.	
	COE-MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
4473	Nitrate of Soda, -----	E. E. White, Clarks Green, -----
	READING BONE FERTILIZER COMPANY, READING, PA.	
4489	Nitrate of Soda, -----	C. R. Gumaer, Factoryville, -----
	YORK CHEMICAL WORKS, YORK, PA.	
4031	Nitrate of Soda, -----	Red Lion Farmers Co-operative Association, Red Lion, -----
		Average, -----
	TANKAGE AND BONE FERTILIZERS.	
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
3457	N. A. C. Brand Ground Tankage, -----	State Insane Asylum, Wernersville, -----
	THE FARMERS FERTILIZER, SEED & HIDE COMPANY, WOMELSDORF, PA.	
3922	Grass & Grain Grower Tankage & Bone, -----	A. F. Kimmel, Orwigsburg, -----
3915	Grass & Grain Grower Tankage & Bone, -----	Lewis Steigerwalt, Andreas, -----
		Average, -----

## ANEIOUS FERTILIZERS.

Moisture.	Nitrogen.		Phosphoric Acid.		Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	\$	
1.63	15.92	15.00			104 00	4473
0.50	16.32	15.60			100 00	4480
0.48	16.28	14.81				4031
0.87	16.17				102 00	
7.85	5.75	5.75	*6.28	6.86		3457
9.82	4.37	4.12	4.83	4.50	43 00	3922
4.91	4.19	4.12	6.96	4.50	50 00	3915
7.52	4.77		6.02		46 50	

\*Deficient.









# INSTRUCTIONS TO AGENTS ENGAGED IN COLLECTING SAMPLES OF FERTILIZERS FOR THE DEPARTMENT OF AGRICULTURE OF PENNSYLVANIA.

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Fertilizer manufacturers sometimes allege that there have been errors made on the part of our sampling agents in selecting samples for analysis. It is due to manufacturers, purchasers and this Department, that the greatest care shall be exercised on the part of all connected with this work, to insure that the samples are fairly taken, are properly labeled and sealed and are sent to the chemist in exactly the condition in which the goods are found. The following instructions have therefore been prepared for the guidance of agents to which strict adherence is required.

1. No sample shall be taken from the manufacturer's warehouse.
2. No agent shall draw in the same season more than two samples of any one brand of fertilizer, unless for some special reason, which he shall state in his report; if a second sample be drawn the agent must satisfy himself that it is not a part of the same shipment from which the first sample was taken.
3. Each agent shall make report from time to time in duplicate, giving the number of each sample taken in consecutive order, the name and address of the manufacturer, the name and address of the agent selling the goods from which the sample is taken, an EXACT copy of the name of the brand of fertilizer and the selling price per ton of 2,000 lbs., at the point of selection. He shall then subscribe his name to each report and send one copy to the chief Chemist as hereinafter provided and the other to the Secretary of Agriculture, at Harrisburg, Pa.
4. Agents shall keep full memoranda of all the samples, stating the number of packages, the hour of day the sample is drawn and the approximate number of packages in stock, also the date that said goods were purchased, from which the sample is taken, together with such additional notes of information as may be of service for future reference in case the accuracy of their work is called in question. Always report individual names in addition to firm names where firms or co-partnerships are acting as dealers or agents. Also give names of persons who assist you or are present when samples are drawn.
5. The sample for analysis must be taken from at least four sacks, the sampling tube to be run its full length diagonally from top to bottom through the center of the sack, turned two or three times to fill it and the contents emptied upon the oil cloth provided for mixing. Mix the materials drawn from the four sacks by lifting the corners of the cloth alternately, at least six times, so as to roll the substance back and forth. Level the well-mixed material with the spatula to a thickness of not more than one inch. By the aid of the spatula divide the flattened heap into quarters, of which two, diagonally opposite shall be scraped from the cloth and the remaining two remixed by the rolling process. The remaining material should be IMMEDIATELY placed in the sample can and sealed. In case you have a larger amount of material remaining on the mixing cloth than can be enclosed in sample can you will repeat the process of reduction by again quartering and mixing and place reduced amount in can. NEVER DISCARD ANY PORTION WHEN FILLING CAN. Can which is one-half to three-quarters filled is more representative than full can where any portion in excess of capacity has been disregarded. Never allow the sample to be exposed to atmosphere for a longer period than is absolutely necessary to assure accurate work. The sample can should then be sealed by placing a small amount of sealing wax on edge of screw cap and impressed with Department seal. The label should be fully prepared and carefully checked with record and sack before proceeding with next sample. The samples must be protected under lock until you have sufficient number to send to the Chief Chemist, Harrisburg, Pa. The sampling agent must be in a position at all times to be qualified as to the correctness of his work and the safety of the sample while in his possession. Cases containing samples must be shipped by express, prepaid and receipt taken therefor.
6. Agents when practicable, will keep the Secretary of Agriculture informed in advance, of the points to be visited, so as to be promptly reached by telegraph or mail, if necessary.

# SPECIAL NOTICE.

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This Department expects to continue the publication, early in each year, of a list of fertilizer manufacturers who have complied with the law of this State by filing with the Department the required analysis and paying the legal license fee, together with the trade names of the several brands for which such fees have been paid, so that dealers may be able to avoid making themselves liable to prosecution.

The policy of the Department for some time in the past was to bring prosecution against manufacturers, where it was possible to reach them, rather than against local dealers who are found selling unregistered goods, or goods that in other respects fail to meet the requirements of the law.

It was found, however, that in pursuing this method exclusively, we were sometimes subject to long delays before cases brought, came to trial, and as our witnesses are agents and chemists of the Department who are liable to change, it sometimes happened that before the cases were listed for trial they had gone to some other field and their presence in court could not be secured.

For this reason prosecutions, when necessary, are now being instituted either against the manufacturers or persons selling goods that do not comply with the law as we may elect.

CHARLES E. PATTON,  
Secretary of Agriculture.